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THE PRE-SCHOOL AGE

A MOTHER'S GUIDE TO A CHILD'S OCCUPATION

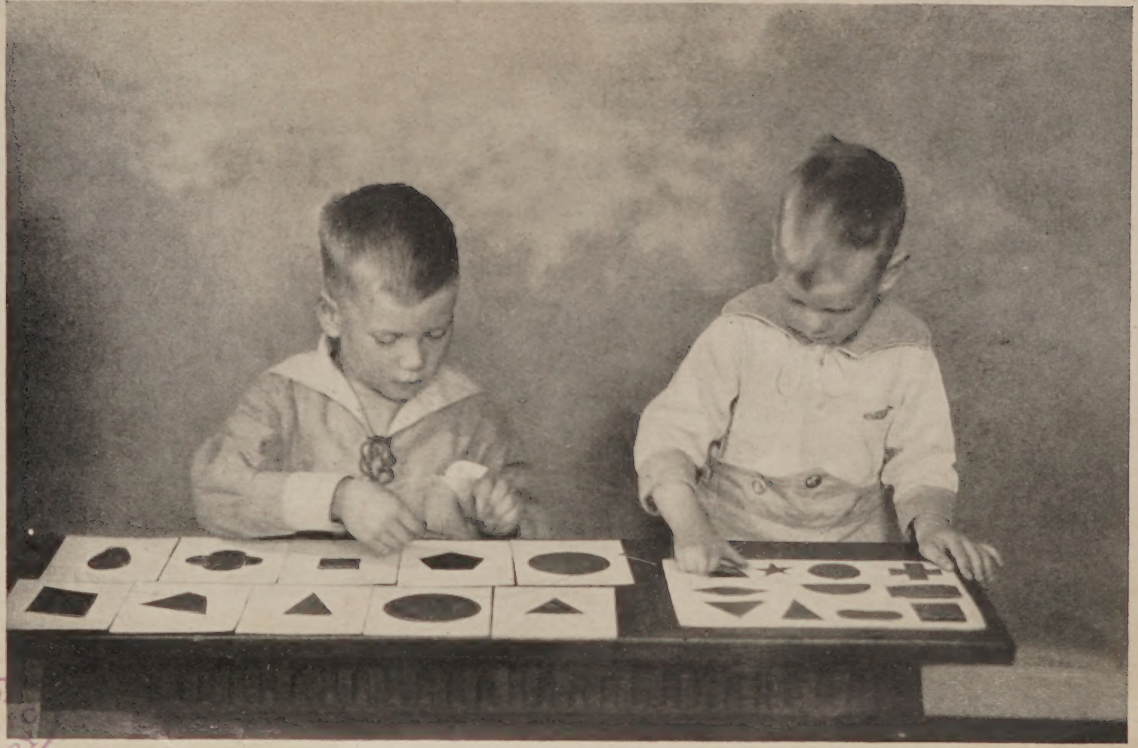

PLATE III

HOME-MADE INSETS

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THE PRE-SCHOOL AGE

A MOTHER'S GUIDE TO A CHILD'S OCCUPATION

BY

MINNIE WATSON KAMM

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THE PRE-SCHOOL AGE

CHAPTER I

INTRODUCTION

THE parent who said to the Greek philosopher, "I will give you my son to train while he is yet young; he is less than three years old," was stunned by the reply, "It is already too late." The father considered that his son's education had not yet begun, but the prospective teacher realized that it was much farther advanced than three short years would seem to indicate.

"In every work, the beginning is the most important part, especially in dealing with anything young and tender," declared Plato.[1] "Give me the child for his first seven years and you may have him for the rest of his life," runs the Catholic proverb. "The child learns more during the first five years than in any equal period of his life; and, at the age of five, his character is well set,"[2] says Professor

[1] R. H. Quick. "Educational Reformers." D. Appleton and Company, New York. (1890)

[2] C. E. Seashore. "A Child Welfare Research Station." University of Iowa Bulletin No. N. S. 107. (1916)

Seashore. And yet all the established systems of education, as far back as we are able to trace, commence with children of from five to seven years of age.

Greek and Roman children started to school at seven years, and in China, India, and Persia, formal education began at from six to seven years. In Greece, the early domestic education was relegated to nurses whenever possible, but for the first six or seven years, the Roman matron was the only teacher of her children. "With the utmost fidelity she formed their language, ideas, and moral sentiments. It was not till the age of degeneracy had set in that Roman mothers intrusted their children to nurses and pedagogues." [1]

But during the Middle Ages, education was subjugated to the demands of the Church, and not until the time of Fénelon (1651–1715) is there record of the fact that very young children need educational training. Rousseau, the theorist (1712–1778), the next exponent of early training, stressed especially the early training of the special senses in very much the manner actually undertaken by Doctor Montessori some hundred and fifty years later.

Froebel pushed back the educative process from one to two years in the kindergarten, and the Montessori system covers much the same period, both educators, however, reaching down into the earlier

[1] F. V. N. Painter. "A History of Education." D. Appleton and Company, New York. (1886)

years to some extent. But there is no systematic scheme for the teaching of children of less than kindergarten age in the home, and whatever guidance we have is abstruse and scattered through the large literature on child welfare.

Thus we are allowing the most precious years of life to pass by aimlessly, thinking that this is the time *par excellence* for developing the child's physical nature and that mental development will take care of itself later on. Professor Seashore says, "Many a mother thinks that the formation of character takes place when the child goes out of the home. Very few realize that the most delicate and most telling period of education is that in early childhood in the home." [1] "People do not really believe that anything better can be done for children than to kill the time between the mother's arms and the season when they are to be taught to read," says Miss Peabody, "and so this precious interval, when the habits of thought and affection are forming, is given up to be filled by chance, risking life-long difficulties for the child." [2]

Mrs. Fisher gives us the comforting assurance that "most mothers are not looking for the easy way to bring up children, but are searching for the best way with whole-hearted fervor." [3] But, at the

[1] C. E. Seashore. "A Child Welfare Research Station." University of Iowa Bulletin No. N. S. 107. (1916)

[2] Elizabeth P. Peabody. "Lectures in the Training Schools for Kindergartners." D. C. Heath and Company, Boston. (1888)

[3] Dorothy Canfield Fisher. "Mothers and Children." Henry Holt and Company, New York. (1914)

same time, most mothers have neither the time nor the opportunity for searching out these best methods for their guidance. Moreover, practically all the books written on education begin with the child of school age.

We have some assistance for this early period of development in Froebel's first few "Gifts", which are intended for the pre-kindergarten age, and references to these are numerous in the literature. Much of the Montessori material is also adapted to home use.[1] The mother can glean from these and many other sources things she finds applicable to her individual children at their particular ages and thus aid in laying a broad foundation of character several years before the formal education begins.

This does not mean, however, that the child's head must be the receptacle into which is to be poured everything the parent thinks he should have or that interests the parent at his or her present age; the child, himself, is the ultimate criterion as to how much mental food he can digest and how fast it can be fed to him. "A little child shall lead them" is no less applicable in this instance; the child directs, the parent develops. But it requires keenness of insight on the mother's part to determine what is going on within the little head and she must proceed slowly from what he knows to what she wishes him to know.

It is a matter of serious import to give the child all

[1] A list of references on Froebel and Montessori will be found at the end of this volume.

that his stage of development demands and to give it to him at exactly the right time. His needs are self-directed, but only in bare outline; they need the elaboration that wise minds of the past have devised. I feel that it is better to present projects too early than too late; if the child is apathetic, they can be removed and given a few months later, with sometimes surprising results.

The direction of his education in these early years must necessarily be along different lines from those of later years. Motor activities and development of the organs of special sense come before the higher mental processes. Certain things must be presented at their proper ages to be most easily acquired; I suppose this phenomenon dates from the period when the race was at exactly the same stage of development as the individual child when the interests are paramount. Every playful occupation of the child was once serious work of the adult, and play in any one year differs greatly from that the year following.

If a tiny baby is given a noisy rattle, it may give him a fright from which he may not recover for months, but a normal child of one year is intensely interested in noisy objects. The two-year-old, however, is past the noise stage and he cares more for brightly colored objects, which would have interested him little if at all a year before. A little fellow of three must pull apart his toy to see what is inside and a little later he wants to find out what makes it

go. At this stage he needs things which he can destroy — cloth to pull apart, paper to tear, possibly dishes to break with impunity. A little later he wants to draw, and at from four to five he is eager to count, to write figures, and to add the simpler combinations. He sees not letters but words and wants to know what they mean; he hears strange expressions and wants them defined, and his own vocabulary is a rapidly enlarging one as a consequence. All these interests we should capitalize as they appear, for they represent stages only in mental development and are bound to disappear.

When the child starts to kindergarten, the teacher frequently considers him one more little blank wax tablet upon which she is to be the first to impress her stylus. Instead, however, the grooves are already so deep in certain well or poorly directed lines that they can never be completely erased.

I think the first five years are the most important in the whole lifetime, and, further, that in the normal child the period from the second to the third birthdays is the most important of these first five years. It is in this year that the child acquires his own peculiar individuality, he becomes more or less independent, his personal habits become established, and he senses whether or not discipline will be enforced. He is quick to detect any qualified honesty in his parents and to inculcate it in his own character. His affection and generosity or lack of these qualities begin to be apparent and defects in

any of the virtues are most easily corrected if taken in hand as soon as they appear. It is in this year that the child lays the foundation of his vocabulary, and if he hears only good English and is taught to enunciate reasonably well, there will be few difficulties with speech later on. If he is given only the best books, music, pictures, etc., suited, of course, to his years, a desire for the mediocre will not be likely to develop.

"If the child at this age passes the greater part of his time in company inattentive to manners, or unrefined, then he will imitate all sorts of things injurious to him, and will easily acquire habits that hinder his further development. It is, therefore, of the greatest importance, even at this early period, to prevent the intercourse of children with strangers and to avoid everything that might open wrong paths to the imitative impulse." [1]

No one can say how much of our individual complexes is due to heredity and how much to environment. We compare our traits with those of our immediate relatives, and those traits which we possess in common are regarded as hereditary, forgetting that these individuals may have been subjected to similar early environments. It is therefore quite probable that much of what we attribute to heredity is really due to the surroundings of the individual as a very young child.

[1] W. Preyer. "The Mind of the Child." D. Appleton and Company, New York. (1893)

We think we are fond of reading, perhaps, because most of our immediate ancestors have been, that this acquired characteristic has come down the line long enough to have become hereditary, but may it not have been due to the fact that the mother has repeatedly thrust a book into the hands of her offspring at an early age until he has become interested enough later to seek out books for himself, and that this early interest has become habit in subsequent years?

If the father is interested in tools and works with them, his small son is introduced to them very early and soon becomes proficient in handling them. If, however, the father is fond of tools but since his child's birth has been denied the opportunity of their use, would the boy have any greater interest in tools than many another boy whose father has a positive antipathy for them?

Since I believe these questions can never be settled, we can take advantage of the doubt and make the child's environment what we desire him to become, irrespective of what heredity he may be known to possess. Our desires for our children and our heredity, which is also theirs, are very likely, however, to coincide.

A child's physical deformities may in large part be corrected if one begins early enough, that is, before the bones are too thoroughly impregnated with calcium salts; after two-and-one-half years, it becomes increasingly difficult to make the desired

corrections. Broadly speaking, the same is true of mental aberrations, as differentiated from actual defects; but the pathetic part is that these traits are less apparent and we are prone to discover them only after it has become more or less difficult to alter or eliminate them.

In this book it is not aimed to discuss the physical and moral characteristics of early childhood, these foundation stones of human life being of too vast proportions for such a treatise. The following chapters are intended primarily to assist the busy mother in giving her children intelligent mental occupations during these early formative years, and in so far as possible occupations which can be performed while she is busy with her many duties about the house, always remembering, however, that every mother's chief duty is centered in the child. The child needs not so much *occupation* during these first years as *directed occupation*.[1] Allowing him to do what he likes in a haphazard manner and with no intelligent direction is going to make of him a haphazard man; the world is full of people who turn aimlessly from one thing to another and who cannot concentrate on any one thing long enough to master it.

[1] Many educators disapprove of the "novelties" offered for children in the shops as mere catchpennys and time-killers, and of no permanent value. I believe, however, that all these toys and materials cannot be placed in the class with the greater majority; selected with discretion, some are of positive value in education and at the same time aids to the busy mother in giving the child intelligent occupation. A few such are noted in the following chapters.

The mother who does all her own work finds it difficult to spend much time with the children, and it is an unfortunate fact, but a fact nevertheless, that the immediate household duties are more pressing than the intellectual needs of the little child. Prone to procrastination, we fail to visualize the years ahead. If we could only realize that every moment we devote to the child's welfare during these most susceptible five years will be repaid manyfold in the biological advancement of the race!

Any manual help which can be obtained in the household during this period should by all means be procured in order to reserve the mother's strength and time for her superior duty, and yet during the years when young children most need the mother's care, domestic help is most difficult to procure and keep. The mother's supervision of her children, of course, is much to be preferred to that of even the most highly trained tutor during these years, even though she be without special qualifications; her work is a work of love and she alone knows what sort of an adult she wants her child to become.

Miss Peabody, the first exponent of the kindergarten in America, says concerning nursemaids, "The education of mothers is the first thing to aim at, as it would render nursery maids comparatively unnecessary. It is so short a period of a mother's life when she *has* young children, and the book of nature which these few years opens to her *is so rich*, that, for her own being's sake as well as for the chil-

dren's, it seems to me a terrible loss for her to relegate her maternal cares to others during the nursery period.

"The deepest reason why a child should be taken care of in its earliest infancy *by its mother* rather than by a person comparatively uninterested in its personality is this: that *only* a mother can respect a child's personality sufficiently." [1]

It is unnecessary to state that our aim as educators in the home is not to produce forced hothouse flowers which wither as soon as they are taken from their unnatural environment, but rather the slower-maturing, hardy, garden variety, which by thorough tilling of the soil, suitable fertilizer, water, and sunshine, attains a fuller and more lasting perfection.

If a child is eager to learn and gives evidences of precocity, the parents are only too anxious to further the intellectual interests; on the other hand, however, if the child shows signs of subnormality, he is frequently left alone, but it is far the more important that a subnormal child should be given early training in the home. Infinite patience and much time on the mother's part are needed to combat retardation but I believe they will pay large dividends in the end.

The first child is often trained at home for a few years, but subsequent children are not, for the parents' interest dies out or time becomes limited.

[1] Elizabeth P. Peabody. "Lectures in the Training School for Kindergartners." D. C. Heath and Company, Boston. (1888)

The injustice to the later children as they grow up becomes keenly apparent. This is quoted from Professor Terman's chapter on superior children:[1] "Father accounts for the superiority as 'due to the fact that we deliberately set ourselves to the task of educating him when he was a young child. Commencing at the age of two years I adopted artifices to make his play a source of education and kept at it persistently until he was five years old and had acquired the fundamentals of the first three years of school, after which I dropped the matter. In the case of the second boy, I had no time to take that course and 'did not do so.' (Second boy only average.)"

Many, if not most, college-trained mothers, and even those who have had professional training as well, look into the face of their first-born absolutely in ignorance of how to proceed. We depend on "maternal instinct" which is supposed to arise at the proper moment, to see us through. But in how many of the learned professions are the practitioners permitted to enter upon their careers with *instinct* alone to guide them? Many educated people are unaware that there is a large literature on child study and need only to have the door unlocked that they may enter upon it independently when the necessity arrives.

[1] L. M. Terman. "The Intelligence of School Children." Houghton Mifflin Company, Boston. (1919)

CHAPTER II

THE FIRST YEAR

For the first few months, the child needs no objective education; he is a self-sufficient ego just getting acquainted with himself, and the best treatment adults can give is to leave him alone, except, of course, as regards his physical welfare.

The new-born babe can detect lightness from darkness but he cannot see objects; the optic lobes of his brain are relatively undeveloped and his ocular muscles are not yet trained to focus. His early vision is supposedly monocular, *i.e.*, he sees two objects instead of one, and it is only by education and habit that binocular vision develops and he becomes able to comprehend size and form of objects and their relative distances away.

At from one to two months, the child is able to gaze consciously at an object, and a week or so later he can follow a bright, slowly moving object. Gaily colored objects may attract or repel as early as the fourth month, but the "color sense" does not appear until considerably later.

One frequently sees a colored ball suspended over the front edge of the hood of a small baby's carriage when he is out riding. It is directly in the line of his vision and he is forced to look at the rapidly swaying object or close his eyes. The color does not yet attract him and he is just learning to focus his two eyes together on slowly moving objects; therefore he must fail to see the ball altogether, as we fail to see the space between pictures in a cinema film, or else strain his developing eye muscles in trying to keep pace with its movements. Thus early may the unwise mother commence a desire for distraction and later on she may wonder why the child is "nervous."

Miss Shinn says [1] at the end of the second week one child could rest her eyes on a brightly lighted spot on the ceiling and then stare fixedly at it, and that this staring should not be interrupted lest one interfere with the developing power of attention.

A baby is deaf when born because the Eustachian tubes are still filled with mucus, and it is only after respiration has taken place long enough to clear the tubes that air enters the middle ear and the sense of hearing is established. Tracy says [2] the period at which the child begins to hear varies from the sixth hour to the third week, according to the maturity at birth. If, in the fourth week, a healthy, normal

[1] Millicent Shinn. "The Biography of a Baby." Houghton Mifflin Company, Boston. (1900)

[2] Frederick Tracy and Joseph Stimpfl. "The Psychology of Childhood." D. C. Heath and Company, Boston. (1909)

child makes no response to a loud noise behind him, there is reason to fear that he will be deaf and dumb. Loud sounds often attract the notice of week-old babies, but one cannot determine whether it is the actual sound or the vibration of the air which strikes his sensitive skin and thus gives rise to the sensation.[1] The localization of sound and the recognition of a particular voice come only after the child is several months old.

But rhythm, which is closely allied to sound, comes much sooner. The mother's lullaby, a combination of rhythm and melody which modern babies know little about, soon exerts its soporific effect. Babies of only a few weeks often show an interest in music and some can even differentiate between good music and poor.[2] Tracy [3] records an instance of a child of five-and-one-half months who could distinguish between plaintive and lively music and cry or laugh in accordance.

Almost all children a year old, even the subnormal, show an appreciation of music, and this interest increases rapidly during the first few years. If little children live in an atmosphere of good music, uncon-

[1] Helen Keller was able to "listen in" to Beethoven's Ninth Symphony by radio and could distinguish instruments and voices, not because she heard the sounds, but because, as she says, she felt the vibrations and rhythm through her tactile sense.

[2] Louise E. Hogan. "A Study of a Child." Harper and Brothers, New York. (1898)

[3] Frederick Tracy and Joseph Stimpfl. "The Psychology of Childhood." D. C. Heath and Company, Boston. (1909)

sciously they will acquire one of the finest types of culture. How many people who "have no ear for music" are deficient because their earliest years were devoid of its pleasures?

The sense of touch is well developed in the mucous membrane very early in the child's life and is probably present before birth. The tip of the tongue is sensitive in new-born infants and is closely correlated with the sucking instinct. It is well known that the new-born child will close its palm around a finger laid upon it.

These three senses of sight, hearing, and touch must be developed to some slight degree before things of the external world are able to impress the small babe.

The movements during the first few weeks depend mostly upon bodily conditions and emanate from within rather than from stimulation received from outside sources.[1] The involuntary muscles of breathing, circulation, and digestion, the instinctive movements of sucking, crying, etc., are more or less well developed at the first and are greatly strengthened by use. The fundamental voluntary muscles of the arms and legs are first exercised by aimless, jerky, impulsive movements which even the fetus possesses and which are purely unconscious. The impulsive movements gradually assume an imitative character. The legs are drawn up and about the

[1] E. A. Kirkpatrick. "Fundamentals of Child-Study." The Macmillan Company, New York. (1914)

same time the arms are outstretched, bent at the elbow. The child may try aimlessly to get an object to his mouth.

Perez [1] says the child of two months, not being able to judge distances, stretches his whole body toward a desired object. He sees his hand but does not know that it is a part of himself. At three months, he can lift his hands to his face and move his fingers slightly. His eye muscles are being strengthened and educated, for he discerns slowly-moving objects and begins to comprehend form and distance.

Thus for the first three — possibly four — months the child needs no external objects to attract his attention. From about the fourth month, muscular coördination becomes perfected so that he is seldom still. The first intentional grasping and holding of objects occurs about the fourth month, and when this ability has been acquired, he needs his first plaything. Color does not yet attract him, but sound does.

A First Playthings

Therefore, a fresh sheet of crumpled white bond paper is appropriate as a first gift. Newspaper is unsuitable, for it may become wet and whole masses swallowed, and the print is of course undesirable; a sheet from a magazine is almost as unwise. But

[1] Bernard Perez. "The First Three Years of Childhood." Translated by A. M. Christie. A. N. Marquis & Co., Chicago. (1885)

high-grade bond paper absorbs moisture very slowly and even when moist is tough and not easily swallowed. It is readily grasped, is sanitary and it crackles loudly but not in a startling manner. It tears with difficulty, which factor interests and perplexes the child, leading him to persistent effort and concentration. This plaything will occupy the small babe a surprisingly long period of time and does not fail to attract his attention for four or five months. Preyer [1] says his child took great pleasure in tearing and rolling newspapers from the fifth month until the third year.

While it is instinctive for the small child to test objects by carrying them to the mouth, just as done by other animals, the modern mother begins early to train the child not to do so before the habit is formed. There is no better time to begin than with the first toy.

To secure content, pleasure, and smiles is the first step in education, says Froebel, but to remove pains, tears, and uneasiness is just as important.[2] He further informs us that "Babies should not be left too long in bed or cradle with no external object to invite their activity; for that leads through bodily flabbiness to mental feebleness. . . . To guard against the latter, it is well to hang a cage containing

[1] W. Preyer. "The Mind of the Child." Part I, "The Senses and the Will." D. Appleton and Company, New York. (1893)

[2] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

a merry bird where the child can see it, thus providing profitable and varied occupation both for the senses and for the mind." Is this not a charming suggestion? But one probably followed unfortunately more frequently in his native country than in America.

Rattles

Most children are given as their first plaything a rattle. This toy dates from remotest antiquity and possesses an interesting history. Like many another children's toy, it was probably used originally by adults to serve some useful purpose, and after being discarded by their elders, passed on to the children. For this reason it is impossible to determine the status of many objects, apparently toys, in the museums, which have been recovered from Egypt, and China, and from the primitive peoples still extant. Rattles were used to scare away the evil spirits during mystic rites in woodland temples and are still used by the South Sea Islanders in the performance of their religious ceremonies. Such rattles are sometimes made of pottery and partly filled with small stones, and frequently of sugar cane, bamboo, or twigs bound together and holding in place at the top a hollow ball containing gravel.

Several rattles were found by Schliemann[1] in excavations on the site of the ancient city of Troy, of

[1] Heinrich Schliemann. "Ilios the City and Country of the Trojans." Harper and Brothers, New York. (1881)

unknown antiquity. One of these is of gourd-shaped terra cotta with a handle perforated for suspension on a string probably about the child's neck and decorated with vertical incised lines. It still contained small pieces of metal inside when discovered. (Figure 1, *a*) Another larger and more elaborate rattle, also of terra cotta, was hollow, containing metallic particles, and possessed a slightly flattened base, probably for standing when weighted inside. It was in the form of a female figure with the hands folded on the breast. (Figure 1, *b*) The necklace around the neck (the head, if there were any, had disappeared) consisted of three incised strands with numerous little flat plates hanging vertically, very similar to the actual gold jewelry found in the same location.

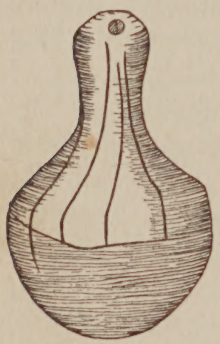


FIG. 1, *a*: Terra cotta rattle from the site of ancient Troy, of unknown antiquity. After Schliemann.

Rattles of terra cotta are fairly frequent from Egypt, many in the form of animals. One of those at the Metropolitan Museum is a hollow cow six inches long with pebbles inside and dating from prehistoric times (before 5000 B.C.). See Plate 1, *a*.

In spite of these numerous instances of more ancient noise-producing toys, the first so-called rattle is attributed to the Greek philosopher and scientist, Archytas (428–347 B.C.), a friend of Plato, who devised it as a plaything for the children of

his slaves.[1] Aristotle is reported to have said, "The rattle of Archytas is a useful contrivance, keeping children from breaking things about the house."

We do not know the appearance of this first Greek rattle, but it soon became an elaborate toy, made with a handle of coral, agate, or ivory for the child to bite upon, often with a whistle in the end and adorned with bells. A number of rattles have been found in excavations at Pompeii. One such consists of a circle of metal with bells placed at intervals and a small ball at the top for attachment to the ivory handle. Another consists of two bars of metal with small wooden slots which, knocking together, make a rattling sound much like the slap-sticks which find favor with boys of to-day. Others were miniature sistra, the familiar musical instruments of Egypt

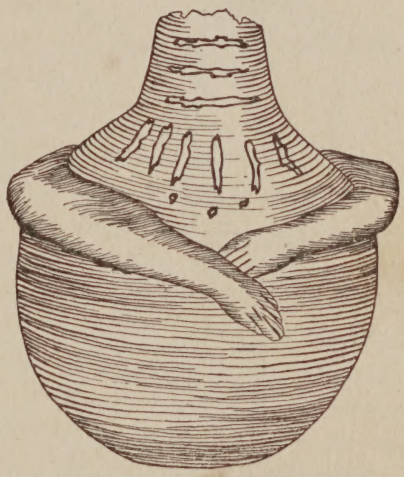


FIG. 1, *b*: Terra cotta rattle from the site of ancient Troy, of unknown antiquity. After Schliemann.

[1] "The illustrious Archytas condescended to invent the child's rattle." Percy Gardner and F. B. Jevons. "A Manual of Greek Antiquities." Charles Scribner's Sons, New York. (1895)

and later of Rome, consisting of bronze lyres threaded with horizontal bars, along which slipped small wooden or metal disks, and mounted on ivory handles. (Figure 2)

In paintings by Rembrandt, Velasquez, Van Dyck, Holbein, etc., elaborate carved ivory rattles and gumsticks are often grasped by the royal baby subjects.

FIG. 2: A crude model of a sistrum from Græco-Roman Egypt. Perhaps used as a toy. After Wilkinson.

Since the advent of celluloid toys, the rattle is both a useful and a beautiful object. Being smooth and shiny, moisture and dust do not readily adhere, and since it is so easily cleaned, it is highly sanitary. Painted or enameled figures soon rub off the polished surface, the particles possibly finding their way to the child's mouth, and because they serve rather to please the mother than the child at his early age, are better omitted. The more refined rattles are less noisy, and of course better constructed than the cheaper variety. One of the best I have seen is a hollow celluloid ring, six inches in outer diameter, containing fine pellets. It is easily grasped by the young babe and has no projections or corners to break off. It

serves the double purpose of rattle and teething ring.[1]

I supposed quite unpsychologically that red was the color most attractive to little boy babies and so purchased the gayest rattle I could find, a brilliant cerise affair, for my son when he was four months old. The first time it was presented, I was careful not to rattle it, but as soon as he saw it he burst into a scream of different quality than I had ever heard before. The next day, the rattle was placed where he could see it when he was wheeled into a certain room, but as soon as his eyes rested upon it the same scream burst forth. I did not present it again for a week, and then with the same result. A mottled blue and white rattle was given him silently, and this subdued one pleased him from the first. When it was gently rattled for him, he smiled and soon became proficient in producing all the noise he wished. The cerise toy was given him at long intervals during the next four months to determine his reaction toward it, and it was not until he was eight months old that he would permit it near him. Then, suddenly, he accepted it as though it was an interesting new toy which he had never seen before.

Hailmann says, "The practice of suspending a bell, instead of a ball, before the child, and of ringing

[1] Schliemann found at Troy a mother-of-pearl ring three inches in outer diameter, which undoubtedly served as a teething ring. Another pearl object, unnamed (Figure 3), a little over two inches long, may have served a similar purpose when tied around the child's neck by a cord through the smaller aperture.

it more or less violently, when the little sufferer shows signs of impatience, is very injurious. The same is true of the rattle, which every observing mother knows to be exceedingly disagreeable to the child." [1] And so I think the rattle should not be a noisy one and that the child should be allowed to use it exclusively himself. Older brothers and sisters can start him on the road to nervousness trying to keep him amused by vigorously shaking his rattle.

4 *a*

3

4 *b*

FIG. 3: Teething ring (?) from Troy. After Schliemann.

FIG. 4: Balls from Egypt. After Wilkinson. (*a*) Terra cotta ball with painted decorations simulating a cloth cover. (*b*) Leather-covered ball.

This method of "Entertaining Baby" was clipped from a newspaper recently: "I was visiting a lady friend who had a two-months-old baby who wants to be amused continually. She had the baby in a buggy under the drapes in the doorway and on the drapes hung a long string of celluloid toys. A string was attached to the child's arms, so that when she moved them it automatically moved the trinkets and amused

[1] W. N. Hailmann. "Kindergarten Culture in the Family and Kindergarten." Wilson, Hinkle and Company, Cincinnati. (1873)

the little one." A two-months-old child demanding constant amusement — and getting it!

The Ball

Froebel's First Gift to the child consists of a set of six soft rubber balls, one-and-one-half inches in diameter, covered with worsted, in the three primary and three secondary colors, each with a long string attached. The first three are for the use of a six-months-old child and the second three for a child approaching twelve months of age. At first, one ball is tied by the string to the bed, so the child soon realizes that it is not part of himself but possesses distinct existence of its own. He pulls the ball and bends and twists himself towards it, thus exercising his muscles and giving himself considerable pleasure. "The ball becomes the center of a little world of beauty, life, and pleasure to the young human being; the vehicle and fountain of a great fund of information; the material for unlimited exercise of his growing powers."[1] "He learns to distinguish between united and unity, separation and separateness, having and having had. With and from these distinctions begins the apprehension of thing, of space, and of time. Further, from perception of being, having and becoming, in connection with thing and space, arises that of present, past and future in relation to time. These nine new percep-

[1] W. N. Hailmann. "Kindergarten Culture in the Family and Kindergarten." Wilson, Hinkle and Company, Cincinnati. (1873)

tions which open the gates of a new objective life, unfold most clearly through constant play with the ball." [1]

This conception of the use of the ball is more idealistic than real, for few are the children whose only plaything for the first year of life is a set of balls!

"Other objects doubtless can give the ideas of being, disappearing, returning, seeking, finding, fetching, grasping, holding, rolling, and so on, but none gives so great a variety of movements as the ball. It is this which makes it so excellent a plaything." [2]

Although the child still knows little about color, he senses a contrast in the various balls and also learns to recognize the concept *soft*. When Froebel's Second Gift is presented, he will learn that all balls are not soft, that some are hard, if he has not already recognized this fact from blocks and other playthings.

The mother can help him to become interested in the new gift, but she must in the main leave him to his own discoveries. She can swing a ball slowly like a pendulum to a little tune or rhyme.

Near the end of the first year, Froebel adds to the colored balls a globe, heavier, larger, smoother than the soft-colored balls. This trains the body and limbs, for it necessitates greater activity on the part of the child. A large rubber ball (about four inches

[1] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

[2] *Ibid.*

in diameter) might be utilized equally well. This forms a connecting link with Gift Two, which is presented later.

I am not convinced, however, that a worsted-covered ball is advisable for a six-months-old child. All the baby's toys should be washable and capable of being dipped into boiling water for three minutes at frequent intervals if one is to be insured a healthy baby. No wonder most of the illnesses of early childhood are digestive disturbances until the child has learned not to put every possible object to his mouth! He smears it with saliva and the moist object then readily picks up dust and bacteria, ready for ingestion the next time the toy reaches the mouth. Moreover, I should not allow a plaything to touch the floor without taking it to the sink and allowing a free play of running water upon all parts of it.

A plain, soft, rubber ball may be substituted for that covered with cloth or crocheted wool, but the color and gilt decoration on many rubber balls come off and make them, in turn, sometimes objectionable. I believe balls are not made in sets to conform with Froebel's color schemes with the colors incorporated into the rubber itself, but they come in various colors, however. White wooden balls are smooth and suitable for little babies, and colored celluloid balls are equally as well adapted, but of course neither possesses the characteristic of softness.

The ball as a plaything for small children possesses a long and distinguished history. It may have origi-

nated as a plaything even before the advent of man, for many young animals, particularly those of the genus *Felis*, enjoy rolling a round object. Large hard seeds, fruits, and stones may have been progenitors of balls made by man. Osborn[1] does not mention balls as having been found in the caves of prehistoric man in Southern France, but the ever-present artifacts, rounded stones, might have served this purpose without contributing in the least to history. Schliemann, likewise, made no mention of balls *per se* at Troy, and possibly for the same reason.

The earliest record we have of balls made by man is that from Egypt, for use in games and possibly as nursery toys, especially during the Græco-Roman era.[2] Some were made of leather sewed crosswise with string and stuffed with bran or cornhusks (Figure 4, *a*); others were made of string or the stalks of rushes platted together to form a circular mass and then covered with leather; a third type resembled modern covered balls, the converging bands of variegated woolens being as bright to-day as when they were sewed. (Figure 4, *b*)

Miscellaneous Toys

The following objects are suitable for playthings for a six-months-old child able to sit erect: a square

[1] H. F. Osborn. "Men of the Old Stone Age." Charles Scribner's Sons, New York. (1916)

[2] Sir J. G. Wilkinson. "A Popular Account of the Ancient Egyptians." Harper and Brothers, New York. (1853)

or rectangular-faced block, a rubber or wooden ball, an aluminum cup, a collapsible tape measure (which he quickly learns to operate, to his great delight), a collapsible aluminum cup, a small aluminum pan with no sharp edges. These objects can be washed as often as necessary. Objects which can be tied to the cab or crib with washable tapes eliminate contact with the floor.

A glass bottle, although sanitary, is highly objectionable, for glass particles are sure to chip off by banging against the crib and may be carried to the mouth. Badly cut hands are probabilities and not merely possibilities. A string of beads or buttons, a rattle with small bells or bits of metal or wood attached, are obviously dangerous.

A prism hung in a sunny window is interesting both to the small babe and an older child.

Long, slender playthings, such as a clothespin or a spoon, although sanitary, are not as good as more bulky objects for a six-months-old child, for there is always present the danger of pushing them down the throat far enough to injure it. Two or three keys on a key ring, if securely fastened, can be kept sanitary and are highly entertaining.

Exercises for Baby

Froebel believed in exercising the muscles of the small babe as they develop rather than place the exercises several months later, after the muscles had grown and not been subjected to external stimuli.

For the small baby, he devised "Falling, falling", "the mother's answer to the child's dawning sense of a life distinct from her own."[1] Make a basket with the hands a few inches above the bed and with the baby therein allow him to drop gently back upon the bed from the hands when he is in a half-upright position. This exercise aims to strengthen the trunk muscles.

Exercises for the legs may be performed to these rhymes:

Shoe the horse, shoe the mare,
But let the little colt go bare.[2]

Pitty, patty, polt!
Shoe the wild colt;
Here a nail, and there a nail,
Pitty, patty, polt![2]

Shoe the colt, shoe the colt,
Shoe the wild mare;
Here a nail, there a nail,
Colt must go bare.[3]

[1] H. R. Eliot and Susan E. Blow. "The Mottoes and Commentaries of Friedrich Froebel's Mother Play." D. Appleton and Company, New York. (1895)

[2] Emilie Poulsson. "Love and Law in Child Training." Milton Bradley Company, Springfield, Mass. (1899)

[3] "The Only True Mother Goose Melodies." Lothrop, Lee and Shepard Company, Boston. (1905)

Leg over leg,
As the dog went to Dover;
When he came to a stile,
Jump he went over.[1]

As the babe lies on the bed, the mother takes hold of his bare feet and bends his knees, sometimes crossing one leg on top, sometimes the other. The jingles give him a sense of rhythm which he may, or may not, be too young to appreciate.

A kicking rhyme full of verve is this, by Miss Poulsson:

Kick, little baby,
  Kick and grow strong!
Press against mother,
  List to her song.

Such a strong baby!
  How his legs go!
That's the way, Baby,
  Stronger to grow.

Kicking and tossing
  Up and then down,
Soon shall my baby
  Trot through the town.[2]

[1] Ethel Franklin Betts. "The Complete Mother Goose." Frederick A. Stokes Company, New York. (1909)

[2] Emilie Poulsson. "Love and Law in Child Training." Milton Bradley Company, Springfield, Mass. (1899)

Little exercises to make the baby mentally alert and to laugh, but which are easily carried too far, are these:

The rabbit, the rabbit
Went 'round the house
And 'round the house, etc.
And went right in there. (Poking the chest) [1]

the "Little Mouse" version of the above; "This Little Pig Went to Market"; and

Dance, little Baby, dance up high,
Never mind, Baby, Mother is by;
Crow and caper, caper and crow,
There, little Baby, there you go;
Up to the ceiling, down to the ground,
Backwards and forwards, round and round;
Dance, little Baby, and Mother will sing,
With the merry carol, ding, ding, ding.[2]

To point out the features, there are several rhymes, such as these:

Knock at the door,
Peep in the window,
Lift up the latch,
And walk in.[3]

[1] Emilie Poulsson. "Love and Law in Child Training." Milton Bradley Company, Springfield, Mass. (1899)

[2] Walter Jerrold. "The Big Book of Nursery Rhymes." Blackie and Son, Ltd., London.

[3] Anon.

Brow brinky,
Eye winky,
Chin choppy,
Nose noppy,
Cheek cherry,
Mouth merry.[1]

Brow, brow brinkie;
Eye, eye winkie;
Cheek, cheek cherry;
Mouth, mouth merry;
Chin chopper, chin chopper, chin.[2]

Here sits the Lord Mayor, (forehead)
Here sit his two men; (eyes)
Here sits the cock, (right cheek)
Here sits the hen; (left cheek)
Here sit the little chickens, (tip of nose)
Here they run in; (mouth)
Chinchopper, chinchopper,
Chinchopper, chin! (chuck the chin)[3]

"How Tall Is Baby?" is adapted to a baby of less than a year old and is an exercise in which the child is the chief actor rather than the mother, for in earlier plays there is little response on the part of the child.

[1] Jessie Wilcox Smith. "The Little Mother Goose." Dodd, Mead and Company, New York. (1918)

[2] Emilie Poulsson. "Love and Law in Child Training." Milton Bradley Company, Springfield, Mass. (1899)

[3] Jessie Wilcox Smith. "The Little Mother Goose." Dodd, Mead and Company, New York. (1918)

Peek-a-boo, peeking through the opened fingers, which are then closed together, peeking through latticed fingers of both hands crossed, lead up to plays which involve individual finger movements, but the latter plays may well be left for a later period, after the child has gained control of the fundamental back, arm, and leg muscles.

A little knee jouncing does no harm to a small child and "This Is the Way the Ladies Ride" on mother's lap always creates interest, even up to two years. "Trot, Trot to Boston" may be performed in the same manner; but the toe jouncing "Banbury Cross" is too stimulating to the genital organs to be advisable for babies of either sex.

Noise-producing Objects

At around ten months, the child has reached the stage in his development when he is especially attracted to noise-producing toys. He cannot yet blow a horn, but he can bang a drum or a metal pan, or ring a small bell, or roll about a bell-toy on wheels.

One of my sons at ten months could, by half-creeping, half-crawling, reach a drawer in the kitchen cupboard in which was kept a nest of aluminum saucepans with their covers. At first, his only pleasure consisted in producing as much noise as possible by jumbling them together, but in a short time he began to get the pans out upon the floor and to fit covers to them or to nest them over and over again. When his propensity for nesting things

appeared, I saved pasteboard boxes of various sorts, candy boxes of many sizes and shapes, round cereal cartons with their covers, pill boxes, etc. and placed them together in a window seat where they were readily available for a half-hour's quiet play at infrequent intervals.

Baby Pens

At from eight to ten months, it is a good plan to place the baby in a pen [1] with an old quilt folded to cover the bottom. He is able to strengthen his back by attempting to lift himself by the sides. Froebel would suspend a large ball from the ceiling by a stout string over the pen and have the child reach for it, thus learning to maintain his equilibrium and also strengthen the hip and thigh muscles by reaching and pulling it and setting it in motion. He thinks this a better way for the child to learn to walk than by allowing him to draw himself up by chairs, for there is less liability of injury. One may tie a spoon, a clothespin, a rattle, a wooden ball with screw-eye for attachment, a rubber doll, etc. to the various edges of the pen to encourage excursions of exploration. All tapes for tying should be removed frequently for washing.

If the baby is kept in a pen longer than a month or

[1] A pen on the floor is objectionable because of drafts, but the patented pen cribs are too small and there is always the possibility of falling out. The floor pen can be partially folded and enlarged as the child becomes more active.

six weeks, his development is liable to be retarded rather than furthered, and many mothers feel that the child learns to walk more readily if allowed on the floor from the first. When he begins to creep about and to touch various objects, a new world is discovered, and his mental development is rapid, but at the same time his intestinal tract is bound to receive a new source of infection, for he is not yet entirely past the mouth-examination period. One cannot be too careful of the floors in the rooms where the baby is permitted to creep. An ideal, seldom reached, is that of removing the street shoes before entering the baby's room.

If there are other children in the family, it is almost impossible to keep the floors free from small objects, buttons, bits of paper and lint, small nails and pins, etc. and so the baby should early be taught to show mother any foreign object he may have placed in his mouth. In many instances this works surprisingly well, for the baby is liable to hold foreign objects in his mouth for some time before he attempts to swallow them. One has only to peruse the medical journals — almost any copy of any journal will do — to see illustrated a few of the various objects extracted from babies' tracheas and œsophagi.

CHAPTER III

THE SECOND YEAR

Physical Development

By the time a child is a year old, he has begun to move himself independently from place to place and his early cry is rapidly developing into language; thus he possesses the two facilities for a widened mental horizon, locomotion and speech.

The baby's first cry is an automatic "squall" devoid of variations, but around the end of the first month it becomes expressive of his feelings, for the hunger cry is quickly differentiated by the mother from manifestations of pain, fear, and pleasure.

The cry later becomes a babbling, articulate in character, in which the sounds of vowels can be distinguished; and before six months have passed vowels and consonants are combined into syllabic utterances. During the second six months, the child learns to imitate sounds and to gesticulate with some sense of understanding; he comprehends much of what his mother says to him and can, perhaps, speak a few words. His vocal organs, consisting of the lungs, bronchial tubes, larynx, vocal cords, mouth,

tongue, palate, lips, and the first few teeth, are all by this time vigorously utilized.

After he has learned the elements of speech, the child learns to talk. Tracy [1] says the period during which the child is learning to walk is a period of standstill or even of retrogression as regards speech. The child's understanding of words increases rapidly but his imitation is slow; however, "during the second half of the second year linguistic progress is usually so rapid as to render a detailed account impossible."

During the period from twelve to eighteen months, the child learns to stand alone and to walk. His special senses are now being rapidly developed; his hearing is already acute, touch is delicate, and sight slowly changing from farsightedness (hyperopia) to the adult normal, as the shape of the eyeball becomes less flattened anterio-posteriorly. Taste is now well developed. A full set of teeth appears before the end of the year. A sense of color is in the ascendency and the imitation is very keen, being stronger now for a year than at any other period of the whole life.

Froebel's Gift Two

At twelve months, Froebel gives the child a second gift. This consists of a wooden ball, a cube, and a cylinder, each one-and-one-half inches in cross section, with apertures for suspension from cords. The

[1] Frederick Tracy and Joseph Stimpfl. "The Psychology of Childhood." D. C. Heath and Company, Boston. (1909)

First Gift has taught the child, among other things, *color*, while the second gives him the concept of *shape*. This gift possesses similarities with Gift One and also differences from it. The ball is round, but it is not soft or colored, and it makes a noise when dropped or banged against something hard, unlike the other gift. The cube has sides, edges, corners, surfaces, lines, points, form, position, and magnitude, while the cylinder forms a connecting link between the other two.

If the mother is training the child along Froebelian lines, she of course will omit cubes and other blocks, as well as wooden balls, from the young child's equipment until Gift Two shall have been presented. Froebel believes in using a minimum number of objects in order to derive a maximum of benefit from their use. I doubt very much, however, if the abstract concepts of form, shape, size, etc. can be made to mean anything to the child of one year, although their sequence is perfectly logical to the parent or to an older child. The little one looks upon them as pretty baubles until the novelty wears off. I doubt also if many American children are given the minimum of toys; most are probably surfeited with the gifts of loving relatives, selected with more or less knowledge of child-psychology.

We should aim to strike a happy medium between too many and too few toys, remembering that one thing at a time spells concentration as well as contentment.

Blocks

Blocks of various sorts are perhaps the best gift for children of from one year to fifteen months. A set of cubes stimulates the desire to construct, the first step in which constructiveness is the fascination in destroying what mother has built for him. This of course should not be construed as a vicious tendency, for it is only the dawn of a new stage in development. He first learns to build in order to destroy, and then for the pleasure in building, and, finally, for the joy in the finished product.

Uncolored blocks are best for a first set until the child is past the gross stage of mouth-examination, and the first set should consist of about eight large, two or three-inch cubes in order that arm and shoulder muscles may be utilized rather than the later developing, more delicate, finger muscles. Large blocks make large structures which are more impressive than smaller and possess a more stable equilibrium.

After he is able to handle large blocks successfully, a set of inch cubes in solid colors, sometimes called in the shops counting cubes, gives a new interest, that of color. One-and-one-half inch cubes would be better than the smaller ones, but I doubt if they can be found in the stores. Each block is stained one of six colors and these brightly colored bits of wood are fascinating and easily manipulated. They teach the colors almost automatically, with little sustained

effort on the part of the child. Teach him the primary colors first, one at a time; pile all the similar blocks together so they appeal *en masse*, removing all the rest. Do not give more blocks until the first name and color are properly associated. The color sense, when once stimulated, develops rapidly.

I had been teaching the colors in this way to my son of twenty-five months; he already knew red, blue, and yellow, when he held up a purple block, calling it by name. His older brother had told him the name a week previously and he had remembered it, for this color seemed to fascinate him and subsequently he did not forget to associate name and block as he was wont to do with the others.

Preyer [1] commenced teaching his son color discrimination at nineteen months but he got no response. At two years one month, the child could name red correctly after five days' training. The next week, green and yellow were taught and blue added as a fourth color. Yellow, he says, "seems to be the easiest to distinguish and easiest to retain in the memory." Other colors were added, but at two years six months the child still confused yellow and orange, green and gray, blue and violet, and black and brown. Ellipsoidal disks of colored cardboard, in duplicate, were prepared for teaching and matching colors.

Very simple first exercises with similarly shaped

[1] W. Preyer. "The Mind of the Child." Pt. I., "The Senses and the Will." D. Appleton and Company, New York. (1893)

uncolored or like-colored blocks which the child can readily repeat are these:

Place half a dozen blocks in one long line and shuttle them like a train.

Place five or six blocks even distances apart, all in line.

Place two blocks side by side, then in line with them and with a small space between them two more, a space, and two more, making six in all.

Place three blocks side by side in line and after a small space another group of three.

Place four blocks to form a solid square.

Add blocks to one side and the top to form a larger square.

Vary these placements by using blocks of two colors regularly placed.

Do not attempt too many positions at a time and proceed very slowly. If the child wants to intersperse original designs, by all means allow him to do so, no matter how inharmonious the results; with a lively imagination stimulated, a little mechanical assistance on mother's part will soon suffice.

The colored blocks can be combined with the large cubes in building columns, façades, bridges, etc. Replacing the cubes in their containers affords much pleasure. I think most little folks would be orderly in their habits if left to themselves, for early in life they like to fit things into boxes and to fit box covers over and over again. Pasteboard containers for blocks should be mended with linen tape and their

corners strengthened by coarse thread before they break, when their life will be greatly lengthened.

Long blocks to be used with the two sets of cubes already mentioned may be made at home from a hardwood lath planed smooth and cut into three or four-inch strips, sanded a little at the ends, and painted or shellacked. These long flat blocks are useful to make horizontals with the cubes as uprights in the construction of tall, open structures, which the child will be capable of doing unaided at about eighteen months.

There are three sets of Montessori blocks adaptable to a child of less than two years, and which are most valuable. One consists of a set of cubes ranging from one centimeter on a side up to one decimeter, which are to be piled to make a *Tower*, giving the child a sense of proportion. Another set consists of solid rectangular blocks, eight inches long and ranging in square cross section from one centimeter on a side up to one decimeter. These are to be arranged to form a *Broad Stair*, furthering the child's conception of large-small, thick-thin, and high-low. Following it is the *Long Stair*, which consists of wooden rods one-inch square at the end and ranging in length from one decimeter to one meter, to be arranged as a stairway or as a pyramid. This gives the conception of variation in length. All of this apparatus may be purchased from The House of Childhood,[1] and is fully described in Doctor Montes-

[1] The House of Childhood, No. 103 W. 14th St., New York City.

sori's books and in other books on the method, a list of which is to be found at the end of this volume. The apparatus is beautifully finished and well constructed to withstand the usage of a schoolroom, but is rather expensive for use with few children, in the average home.

The nest of blocks which may be purchased in toy departments and bookstores is not a substitute for the Montessori Tower, but it gives the child the conception of large-small, tall-short, and proportion, and in addition it allows him to exercise his propensity for fitting things together, which the Montessori set does not, since it is made of solid blocks. The hollow blocks begin to interest the child soon after he is a year old and continue to do so for a year, at least. However, I have not seen a set which will hold together longer than a month without considerable reinforcement. The wooden blocks appear to be the stronger at first but they break and come unglued and cannot be repaired successfully. A stout pasteboard set, costing from ten cents to several dollars, can be strengthened by sewing the corners and sides with stout thread and then will last until the manifold thicknesses of thread wear thin. I consider this nest of blocks a most valuable early gift.

From a board of soft or hard wood one-half inch in thickness and three or four inches wide may be sawed strips, the shortest three or four inches long, a square-faced block perhaps, the next one two inches

longer, and so on, until one has about ten strips. I sanded down such a set, rounded the corners a little, and covered the blocks with a thin coat of shellac. From this set can be made a staircase, or, what is more interesting, a pyramid which will not fall over since the blocks are several inches wide. This set, too, is not a substitute for the *Long Stair*, which I feel is too small in cross section for a child under two to construct without its constantly tumbling over. These long blocks give the child a sense of proportion which the cubes do not.

Animals

Before he is two years old, the child becomes interested in animals, real and realistic. One of his earliest books will undoubtedly be a flexible-covered one of domestic animals followed soon by a similar book of wild animals. There are many splendid first books of animals published in England, but few in America, the best obtainable of the latter probably being "The Chicken World" and "The Farm Book", both well illustrated by E. Boyd Smith. To bring all these animals more closely within his early experience, trips to the country and to Zoölogical Gardens may suffice, but the interest once created must be stimulated if long retained.

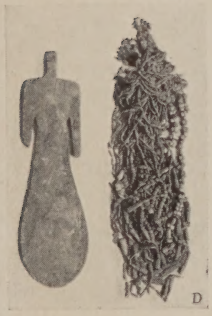
Celluloid animals are easily kept sanitary and are fairly resistant to hard usage, and for these reasons are valuable, although it is true that little children do not love them as they do more realistic ones. Cellu-

loid animals can be obtained in almost endless variety; the ten-cent-store size is frequently quite limited in forms, but larger, well-constructed animals can be purchased for twenty-five cents or thereabouts, including goat, sheep, tiger, lion, giraffe, camel, deer, etc. These may be used in connection with blocks, constructing large pens and stables for them with pyramid blocks placed on end. The animals may be placed at various corners in the construction of fanciful structures, for example, on each step of a pyramid and on the ledges and apices of façades and houses. When the interest begins to falter, they should all be put away for a few weeks, to be brought out again with a renewed or even an entirely new interest, for the little child's memory is very short.

Floating toys for the bath may consist of celluloid canoes, fish, ducks, turtles, and frogs, land animals and dolls being out of place in the bathtub, even though the child is too young to grasp the incongruity at first. Animals other than celluloid may be made at home from rubberized cloth, oilcloth, or sheet rubber and filled with cotton if one has the time and fancy; patterns for these may be obtained from household magazines and pattern counters.

Animals have always been prime favorites as toys. Little terra cotta dogs, pigs, and cows of unknown antiquity were found by Schliemann at Troy,[1] one

[1] Heinrich Schliemann. "Ilios the City and Country of the Trojans." Harper and Brothers, New York. (1881)



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Courtesy of the Metropolitan Museum of Art

PLATE I

Toys From Egypt and Pompeii

A. Egyptian rattle in the form of a cow. Predynastic?
B. An overladen donkey in terra cotta. XI–XVIII Dynasty, Egypt.
C. Domestic animals with cart and plow. From Pompeii.
D. and F. Flat cedar dolls from Thebes, XI Dynasty. The wigs are removed; they are made of mud and beads.
E. Carved wooden doll from Lisht, XII Dynasty. Note the realistic expression.

of them illustrated herewith (Figure 5) representing a fat red pig decorated with incised stars filled with white paste. Rattles in the form of hippopotami, birds, pigs, etc. amused the prehistoric and by no means legendary Trojan babies.

Numerous toy animals of terra cotta and faïence have come down to us from Egypt, such as horses, birds, cows, crocodiles, apes, donkeys loaded with

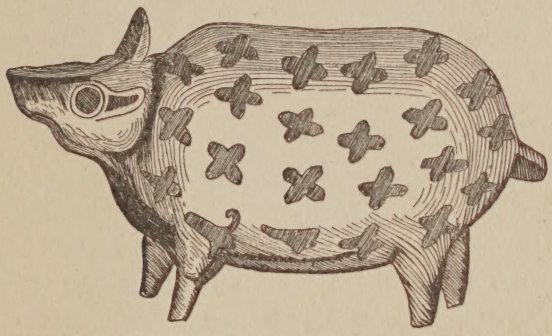

FIG. 5: Decorated pig, in terra cotta. From Troy. After Schliemann.

sacks, etc., dating from the Eleventh to the Eighteenth Dynasties. (See Plate I, *b*.) Toys of less-lasting materials, of course, have not been preserved, although wax and leather-covered animals are known to have existed.

On Plate I, *c*, is also shown a group of domestic animals in bronze found during excavations on the site of ancient Pompeii. Two oxen are yoked to a clumsy two-wheeled cart and two to a primitive plow, other animals, goats, sheep, swine, completing the group.

In a picture on silk from the Ming Dynasty of China (1369–1644 A.D.) there is to be seen a hobby-horse identical with that of modern times[1]; and numerous tiny animals of glazed and colored pottery from China in the Middle Ages are to be found in our museums.

American Indian children loved woolly animals as much as do little folks of to-day, for buffaloes and beavers with self skins have been found among the tribes of our Western Plains. Elk, horses, long-horned cattle, etc. were covered with leather and often profusely decorated with colored beads. (See Plate II, *c*, *d*, *e*.)

One of the most unsanitary playthings a small child can be given is a teddy bear, now fortunately supplanted to a great extent by wiser toys. Did one ever see a clean teddy bear outside a store? From the time the goods is made until it is consigned to the furnace, this toy is a germ collector *par excellence*. I always pity the mother, as well as the child seen cuddling one of these animals, for if she is thus unwise in a small thing, in how many more important things does she fail to think of the menace of bacteria in his welfare!

The white woolly lambs which toddlers so much love are a little less objectionable, for they *can* be scrubbed, to the more or less detriment of their pristine beauty.

[1] Mrs. F. N. Jackson. "Toys of Other Days." Charles Scribner's Sons, New York. (1908)

Courtesy of the National Museum

BOSTON PUBLIC LIBRARY

PLATE II

Toys of the American Indians

A. A warrior with leather-covered shield. Kiowa tribe.
B. A female doll from the Apache tribe.
C. Warrior prostrate upon his horse. Kiowa tribe.
D. Buffalo with bead eyes and nose. Arapooe tribe.
E. Elk with bead decoration. Arapooe tribe.

Last Christmas I saw an eighteen-dollar donkey for sale in a shop, but cannot imagine any child being very enthusiastic on Christmas morning to see a three-foot donkey under his tree! A twenty-five-cent donkey could be enjoyed as thoroughly and, its usefulness past, destroyed without qualm. A three-foot alligator with movable jaws, a four-foot lion that springs, a life-sized tiger — surely the only person who would purchase such toys would be a fond uncle with a large pocketbook and small knowledge of little boys!

Mother's Kitchen

All children like to play in the family kitchen; they often prefer this room to any other in the house, even leaving the elaborately furnished nursery, when allowed, for the kitchen where there is generally something interesting going on. There is such a variety of occupations for little hands — emptying the cupboards of their utensils, turning on and off the water, examining the variously shaped and constantly emptying containers — all of which fascinate and may be made to form a very real part of the early educative process.

A child of a year or less can play intelligently with a nest of aluminum pans or with a nest of pie or cake tins. He delights in spreading them about on the floor and then fitting them together, first by trial-and-error method, but after a few weeks, when his eye has learned to grasp the differences in form, with swift glances only to guide him. If the utensils are

not placed back upon the shelf whence they came, mother and child can make of this a game until the habit is formed, and if the mother can endure the noise and disarray, one step in order and neatness may thus early and easily become a part of the child's character.

At fifteen months to two years the inquisitive child will begin to climb to the cupboards and acquaint himself with the various bottles, small packages, and boxes. This stage of inquiry will soon pass but while it lasts it should be utilized and developed. The shapes and sizes of various containers are of exactly as much educational value as the standard Montessori or Froebelian apparatus, if not as logically presented. Doctor Montessori gives the kindergarten child training in differentiating tastes, but if he has access to kitchen cupboards and his investigations are abetted rather than discouraged, this sense may be developed two or three years earlier. He learns the articles by name and soon comes to recognize the fact that all white substances, such as starch, flour, sugar, salt, soda, are not identical, but that they differ a little in appearance and a great deal in taste.

Half a dozen small, thick, empty bottles kept in a table drawer both instruct and amuse the toddler when mother is busy, although glass objects are dangerous at all times and inadvisable without constant watchfulness. Pouring water carefully demands concentration and develops poise.

Running water always fascinates, and instead of refusing him access to the sink or allowing him to dabble in it at any time, the child should have a definite period for this play, just before the bath or the nap, when the clothing is to be removed, anyway. A high stool, a rubber apron, small pans, bottles, chips for boats, a rubber tube for transferring water, and a soap-bubble apparatus are useful accessories while the stage lasts and the desire is strongest.

The eighteen-months-old child can be taught to bring vegetables from the basement and thus develop fearlessness for dimly lighted places. He delights in helping mother get the meals by carrying utensils and implements, although of course kitchen knives must be kept out of reach. Any child under five is liable to trip and fall upon a knife held in the hand, and the habit should be formed in the elders of placing sharp knives upon high shelves after each use thereof so long as little children are allowed access to the kitchen.

The child very early wishes to help set the table, and this training is very desirable from a psychological viewpoint. Poise, concentration, accuracy, and care result. He can first be taught to carry and place silver more or less accurately and to carry small dishes, one at a time, placing them where they belong. The ability to set a table and to carry in the viands, even tureens of soup, forms an early and important part of the Montessori training.

My son, when twenty-two months old, delighted in carrying an aluminum cup two-thirds full of milk slowly back and forth from kitchen to dining table several times before finally setting it down at his place. He trained himself to spill none. No one suggested that he be of assistance, but when he saw dishes placed to be carried to the table, it pleased him to help, and he learned by observation the proper dishes and the prescribed silver for each place.

I should allow a toddler to perform these operations whenever he desired, but should never do more than suggest their performance. Everything the young child does should be spontaneous, never forced. Stubbornness, monotony, and fatigue should never enter a young child's experience unless we are aiming to develop mere automata in our children. We must exert our discipline gently at this early age, gradually causing the desires to coincide with ours, but only in so far as absolutely necessary for the child's own good. He must be allowed to develop a will, and not, as in the older discipline, have his will broken by his elders.

Dough is similar to clay and just as useful in coördinating the finger movements. Small pans, clean hands, an apron, and a small corner of the kitchen table are the necessary adjuncts to a quarter-hour's delightful occupation never to be denied the child, boy or girl, who wants to help mother; patience with the early whim may prove a boomerang later on, when help is really needed. Like all other early

occupations, it soon loses its pristine freshness and passes; the mother should not put the child off until next time, for next time may never come, and in any case a refusal causes a degree of spontaneity to be lost, something in the child's experience which can with difficulty be regained.

The food-grinder is a source of considerable interest to a child of from one-and-a-half years to four. My sons at less than two could set one up and take it apart alone, and they frequently ground bread for the birds in winter — sparrows, to be sure, but with empty stomachs just the same. It is, too, a source of imagination, for out of it they made at various times a telephone (with the assistance of a small bell), an oil-filling station from which they frequently "filled" the solid rubber tires of their vehicles, a "jack" for propping up these vehicles for repairs underneath, etc. From the potato ricer they made fanciful windmill pumps, mousetraps, etc. These makeshift implements satisfy the mechanical passion when it is beginning to develop and are much to be preferred to perfect mechanical toys.

Little children like to be in the same room as mother, and when she is busy in the kitchen are frequently in her way. One mother had made a small shelf, hinged to the wall, and with a prop which also folded flat against the wall when the shelf was not in use. Here the child could cut pictures, draw, write, and play with blocks, and while out of the way, he was able to talk to and receive encourage-

ment from his mother when disasters befell. The shelf also served for a lunch table, and, with a narrow board tacked around the edges, might be made into a sand tray as well.

Puzzles

Before he is two years old, the normal child will probably have become interested in fitting together bits of cardboard and trying to make with them imaginary patterns. When he shows this tendency, no matter how slightly, he should be supplied with material for developing the new interest. A very simple bird or animal or a baby picture, in colors, possibly an advertisement, may be pasted upon cardboard and cut along straight lines into two or three large pieces. Similar pictures cut into four pieces, and for subsequent use into six pieces and more, can be purchased from kindergarten supply houses, and around Christmas time may often be found in ten-cent stores along with other kindergarten materials not offered at other times of the year.

Miss Wrightston [1] gives several puzzle forms which are simple enough for a very young child. These may be made at home from colored pasteboard or thin sheets of wood, painted, each set a different color. For example, the two pieces comprising A might be in blue, those of B in red, and of C in yellow.

[1] Hilda A. Wrightston. "Sense Training for Children's Development." James A. McCann, New York. (1919)

(Figure 6, *a*, *b*, *c*) The child is given simultaneously the six promiscuous pieces from which to make the three figures. Other similar sets are devised for slightly older children, and will be mentioned later.

Some of the Montessori form cards or insets are very useful in training the eye and are not too difficult

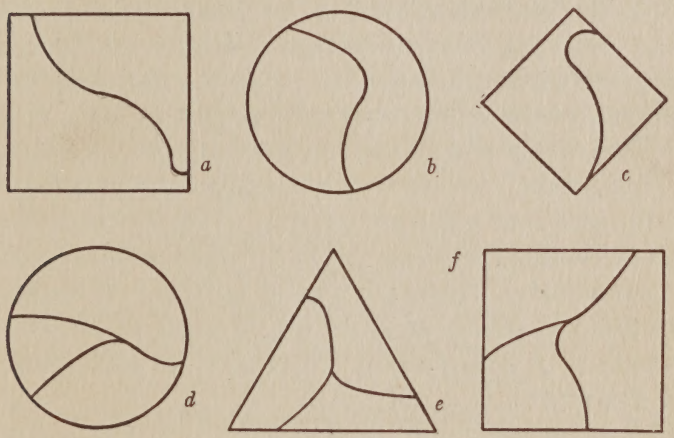

FIG. 6: Puzzle forms. After Wrightston.

for a child of slightly under two years. They will be described, however, more in detail in the next chapter.

FINGER EXERCISES

Before the child is fourteen months old, approximately, he should not be asked to exercise his hands or fingers by specially devised plays, and then only by the simplest. His fundamental muscles, those of the back, arms, and legs, are growing rapidly, not alone in volume but also in strength and nervous

control. After these muscles are fairly well developed, the child begins to use the finer muscles, those of the fingers, organs of speech, facial expression, etc., and now the mother may utilize the simpler hand and finger exercises. If the body is developing normally and has a variety of interests, the fingers take care of themselves to a considerable extent, but the exercises develop mental alertness as well as muscular control, and a few, at least, may well form part of every child's early curriculum.

Practically all children are familiar with the rhyme "Pat-a-cake" before they are many months old and still enjoy it at eighteen months. This is a good first hand-clapping exercise, for it does not involve finger movements. There are almost as many variations of this old rhyme as there are editions of "Mother Goose." Another similar rhyme, not so well known, is this one:

Clap, clap handies,
Mamie's wee, wee ain;
Clap, clap handies,
Daddie's comin' hame;
Hame till his bonny wee bit laddie;
Clap, clap handies,
My wee, wee ain.[1]

"The Mulberry Bush" may be used as a first hand exercise, although there is little the child can do.

[1] Walter Jerrold. "The Big Book of Nursery Rhymes." Blackie and Son, Ltd., London.

Another exercise provoking merriment is this old one: Baby places one hand on the table, mother places one on top, then the child his other, and finally the mother's second, each one being drawn out from the bottom and placed on top in succession. It may be long before the child can do his part perfectly, but this does not detract from his pleasure; he will soon be starting the game and asking mother to join.

When it comes to pointing out the separate fingers and toes, nothing is better to start with than the classic "This Little Pig Went to Market" and this variation, from China:

This little cow eats grass,
This little cow eats hay,
This little cow drinks water,
This little cow runs away,
This little cow does nothing
But just lie down all day.[1]

Then might come "Dance, Thumbkins, Dance", although I question the advisability of stressing this exercise before three years; it teaches muscular movements and gives additional training, but it calls for strain on the delicate finger muscles. "This Is the Church, This Is the Steeple" is rather difficult for the child under two, but he likes it, nevertheless. Like many other of the exercises, the mother will at first have to do most of the work, but the child is

[1] I. T. Headland. "Chinese Mother Goose Rhymes." Fleming H. Revell Company, New York. (1900)

learning to control his muscles and to sharpen his intellect. For the child of, say, two-and-one-half years, I think this exercise of considerable educational value. It requires sustained effort, concentration, muscular memory (if the words are not repeated by the parent each time), and muscular coördination to a remarkable degree. At least five different positions of the fingers are required: (1) the fingers of the two hands are placed back to back and intertwined alternately (the hardest part of the exercise); (2) the hands are bent around, tips of the interlaced fingers inside the palms; (3) the two index fingers are placed upright for the steeple; (4) the two thumbs are placed erect side by side with a small opening at the base for the door, and finally (5) the hands are opened up back to back and all the people appear, not always clothed in their Sunday cleanliness. The ability to perform this exercise only stimulates the child to further similar achievements.

Froebel described in his "Mother Play" [1] a number of finger exercises which come in natural sequence before Pat-a-cake, such as "All gone", which is the opposite of "Bye, bye." Both exercise the wrists. Some of these are as follows:

"Tick-tack" or "The Pendulum." Swing the arm from the shoulder or the leg from the hip. This

[1] Harriet R. Eliot and Susan E. Blow. "The Mottoes and Commentaries of Friederich Froebel's Mother Play." D. Appleton and Company, New York. (1893) Another book, similar in content, is D. J. Snider's "Froebel's Mother Play Songs, a Commentary." Sigma Publishing Company, Chicago. (1895)

may be done while a ball is swinging from a long string fastened to a nail.

"Mowing the Grass." With the child on a table, mother and child hold hands and swing the arms in unison to a little improvised song. An arm exercise similar to the last.

"Beckoning the Chickens." An exercise for the fingers moving separately, with the palms up.

"Beckoning the Pigeons." The pitter-patter of fingers on a table represents pigeons running for food, and exercises the finger joints.

Many finger plays follow these in Froebel's list, but most of them are unsuited to American children whose experiences, particularly if they live in cities, lie along different lines. The woodcuts which so profusely illustrate the book are full of detail which is illuminated in the text. Froebel develops profound, if sometimes veiled, philosophy from each of the exercises, indicating the importance in the history of the race of each simple movement in the young individual. The book is somewhat derided in these days but contains much source-material from which the mother may devise plays to suit her individual needs.

A finger-play book which is splendidly adapted to the mother without time for study of the above is Emilie Poulsson's "Finger Plays for Nursery and Kindergarten", some of which plays are adapted from Froebel's models.

Two verses from "The Merry, Merry Little Men", one of the first plays, are as follows:

Upon each hand
A little band
For work or play is ready.
  The first to come
  Is Master Thumb;
Then Pointer, strong and steady;

Then Tall Man high;
And just close by
The Feeble Man doth linger;
  And last of all,
  So fair and small,
The baby Little Finger.[1]

The book contains many pretty plays graded to suit the growing child, is profusely illustrated, and is very much worth having for frequent reference.

The Æsthetic Sense

During this year, the so-called color sense begins to develop; although the child may yet be unable to name colors, yet he discriminates between them and has his favorites among them. Colored illustrations are beginning to interest him, and his picture books must be chosen with care. Little detail is needed, and the primary colors in illustrations find most favor. Anything which savors of the horrible or grotesque must be elided. He is just learning to recognize the normal, and "Mother Goose" with

[1] Emilie Poulsson: "Finger Plays for Nursery and Kindergarten." Lothrop, Lee and Shepard, Boston. (1893)

distorted faces and bodies is bad psychology; he does not understand the little wan faces and hideous giants, and it is to the parent rather to whom the pictures appeal.

Playroom walls should be decorated with simple pictures, even if this room be the family dining room. All little children are attracted to pictures of people or animals in the act of doing something rather than merely sitting still and looking pleasant. For this reason, Jessie Wilcox Smith's pictures always please, and from the Perry Picture catalogue and others similar to it, the choice is practically unlimited. Bird family pictures are valuable, for the more common birds early come within the child's experience.

There should be abundant opportunity to listen to the best music and by no means music limited to the nursery songs, however worthy these are.

If the child is given the use of paper and pencil early, the tendency to mark and destroy books later may be suppressed. A blackboard, which may belong to an older child, affords scope for arm movements and an outlet for the scribbling instinct, which about the third year becomes directive rather than aimless.

The Vocabulary

The first child early acquires a larger vocabulary than his brothers and sisters, probably because his association is entirely with adults who only relatively adapt their words to his years. The second

child learns by imitation very early how to play, and expends his energy thus rather than in mental enlightenment. Which is the better off, it is difficult to say.

The second child learns much of his vocabulary from the first, and thus he probably possesses a more restricted list of words, simpler ones, perhaps pronounced only approximately correctly.

While the child is acquiring a working vocabulary, parents should be particularly watchful of their own words. Obviously, slang must be avoided if one does not wish it mirrored back; incidentally, there is no better method of curing oneself of such expressions than to observe how ridiculous they sound out of the mouths of babes.

Call an object by its correct name, no matter if three or four syllables in length. Do not imitate the child's pronunciation or smile at his expressions; do not correct him by calling attention to his discrepancies, for a child is keenly sensitive to ridicule during his first halting endeavors with new words. Mispronounced words should rather be brought into the conversation several times, emphasizing them very slightly. The child may persist in using his own pronunciation at the time, but gradually the correct syllables will be incorporated into his speech. "Automobile," nowadays a familiar word to the child, will at first probably be "um", "bi", or "mo"; then "um-bi", "au-mo-bi", and finally all the syllables, in their proper order.

Dolls

The interest in dolls arises about the time the child realizes that he is an individual. When he discovers that the hands and feet with which he has been playing for some months are among his own attributes and that he posseses ears, nose, and later, eyes and a mouth, like his parents, he recognizes with pleasure these same attributes in an inanimate puppet; it may not be for two or three years that he comes to realize that the doll cannot really eat the food which he only secondarily puts to his own mouth and does not feel it when he, perchance, pulls her hair or sticks his fingers into her eyes or whacks her against a chair.

As early as three months, some children may be attracted to dolls, but merely as convenient objects to hold; not before twelve months or more do they realize their significance. It would be interesting to know whether or not little girls are attracted to dolls earlier than are little boys; I doubt if such be the case, for during the first few years sex plays a very minor part in the child's mental development, and playthings which interest the one sex just as keenly interest the other.

Are most dolls representations of the female figure merely by accident, or for a fundamental psychological reason? Do mothers reason that little girls only will be attracted to them and that they will be most attracted by little girl dolls, as an early

manifestation of the maternal instinct (which, by the way, is present in boys as well as in girls)? It is impossible to determine whether or not little boys prefer boy or girl dolls, since twelve out of every thirteen dolls are representations of the female figure. Arguing by context, however, little boys should prefer dolls which most resemble themselves. Ellis [1] mentions the fact that boys seem to prefer exceptional dolls, clowns, brownies, colored, Japanese, etc., but I believe this refers to boys older than five years; I think it will be found that younger boys love dainty girl dolls just as well as do their small sisters.

Little boys should be given the opportunity, at least, of refusing dolls. I see no objection in giving a boy nearing two years old and who shows an interest in dolls, a dainty little doll with composition head, real hair, eyes that close, and a pretty gown. One way of inculcating carefulness is to give the child something which he learns to love, and two years is none too soon to begin. All children are inherently fond of the beautiful, and for this reason it seems to me the doll cannot be too daintily dressed, but in washable clothes; it may be the bright spot in an otherwise rather drab existence. A doll of this character should not be left around, of course, but given the child only when he desires it and put aside when his interest wanes. Many of the finer

[1] A. C. Ellis and G. S. Hall. "A Study of Dolls." Pedagogical Seminar, IV, pp. 129–175. (1896)

traits of human nature may well rise in the emotions which the little child, boy or girl, pours out upon this small puppet.

"It is unfortunate that this is considered so predominantly a girl's play. . . . More play with girl dolls by boys would tend to make them more sympathetic with girls as children, if not more tender with their wives and with women later." [1]

The first doll a child receives is generally a rubber one, and so far as I can see it is a perfectly sanitary object for the mouth-examination period; the pink cheeks and blue eyes, however, quickly vanish, generally down the child's oral opening. The next doll, for a child around one year old, is frequently of celluloid or Turkish toweling with embroidered features. I believe stockinette dolls are more sanitary than those of the shaggy, dust-catching toweling. This closely woven material comes in attractive colors, and the dolls are often charming when made of contrasting shades, with features embroidered or painted. Serviceable dolls can be made from men's blue-and-white cotton socks stuffed with cotton. All these dolls can be put in the family wash and wrung through the wringer with but little loss of their original beauty. Patterns for dolls of various sorts can be found at pattern counters.

Ellis says that dolls increase in size, elaborateness, and number as the child grows older "till the doll

[1] A. C. Ellis and G. S. Hall. "A Study of Dolls." Pedagogical Seminar, IV, pp. 129–175. (1896)

passion vanishes in two dimensions with innumerable paper dolls, toward adolescence."

It is quite improbable that the earliest man was interested in dolls, as he was in objects which rolled when touched; the doll concept represents a considerably higher mental development than does the ball, block, skein of yarn, or paper which rattles. And so, in the history of the race, as with that of the individual, an interest in dolls represents a relatively late period in development.

"It is probable," says Mrs. Jackson, "that the baby girl of Paleolithic ages treasured her chip of bone or stone, wrapping it in a scrap of hide or mothering it with much care," [1] but very naturally no material evidence exists. Osborn makes no mention of dolls among the prehistoric races of Southern France, although he describes small stone statuettes of the female figure which may have been used as dolls.[2]

It was probably true in remote antiquity, as among primitive races to-day, that dolls are not always to be differentiated from these small statues used as votive offerings, idols, and in Egypt as ushabti or inanimate substitutes for the slaves which in previous ages had been killed when the master died so as to be ready to do his bidding in the next

[1] Mrs. F. N. Jackson. "Toys of Other Days." Charles Scribner's Sons, New York. (1908)

[2] H. F. Osborn. "Men of the Old Stone Age." Charles Scribner's Sons, New York. (1916)

world. Witness the collection of little wooden figures excavated in 1918 from an Egyptian tomb,[1] illustrating numerous prosaic occupations, such as rowing, bread-making, flaying grain, butchering cattle, etc. The exquisite terra cotta figurines from Tanagra (fourth and third century, B.C.) might be mistaken for dolls, but were instead household gods and ornaments buried in the tombs of their possessors.

True dolls have not been described from Troy, Mycenæ, or Tiryns, or from Crete, although it is highly probable that children in these relatively high civilizations possessed them. The quantities of crude terra cotta human figures which Schliemann found in both Greece and Asia Minor were used as idols. Like similar figures of the Indians of our southwestern plains, they may have been given the children as playthings after having served their first purpose.[2]

From Egypt, there have been recovered numerous and varied representations of dolls used solely as playthings. "It was the custom to bury the toys of a dead child with the body, and it is owing to this custom, carried on in unbroken succession from the remotest times in Egyptian history, that we are now able to see, touch, and handle

[1] "The Egyptian Exploration, 1918–1920." Part II of Bulletin of the Metropolitan Museum of Art, New York. December, 1920.

[2] P. E. Goddard. "Indians of the Southwest." American Museum of Natural History, New York. (1921)

the identical playthings of the children of archaic times." [1]

In the Metropolitan Museum are two terra cotta dolls found in an Egyptian tomb (1730–1580 B.C.), — a mother and a babe, wrapped together in linen bands. Bodies approximately one foot long have been found of terra cotta more or less three-dimensional, and of thin cedar wood boards, the former often nude for dressing, the latter often decorated with geometric designs in bright colors. Although bodies, heads, and sometimes arms are crudely anthropoid, and legs are generally missing, the hair is very elaborate, consisting of large masses of innumerable, tiny, slender mud beads strung on coarse black or yellow thread. Necklaces of the same slender beads or of delicate blue faïence often adorn the little figures (Plate I, *d*, *e*, *f*). A beautiful ivory doll, representing the highest type of Egyptian culture, was found by Professor Petrie from the Twelfth Dynasty, the eye sockets formerly containing brilliant stones and the head formerly covered with a hair wig. Even rag dolls from Egypt are still in existence.

The Greek and Roman dolls which are still extant are mostly made of wood, terra cotta, and ivory, although wax dolls were common. These dolls were carefully made, the faces expressive, arms and legs jointed with bent pins, sometimes even with joints

[1] Mrs. F. N. Jackson. "Toys of Other Days." Charles Scribner's Sons, New York. (1908)

at elbows and knees. Some were nude and the bodies rather crude, for they were to be dressed; others were clothed in wooden drapery, a part of the body itself.

Little is known concerning dolls of the Middle Ages. Fashion dolls were known as early as the fourteenth century, sent out by *costumiers* from which queens and ladies of the nobility might select their wardrobes. This custom extended down to recent years when it was supplanted by fashion magazines. Speaking dolls and those able to close their eyes were devised at the same time as mechanical toys in general, the greatest maker of automata being the brilliant French engineer and inventor, Jacques de Vaucanson (1709–1782). Paris was the center of the doll trade from the early Middle Ages, with Nuremburg a close second.

Queen Victoria possessed one hundred and thirty-two dolls, thirty-two of which she dressed herself, "a remarkable example of painstaking industry for any girl twelve years old." [1]

Dolls of the American Plains Indians, many examples of which are to be found in the museums of this country, were frequently very elaborate; they were generally covered with profusely fringed white sheepskin, the cover forming a two-piece garment, — skirt or trousers and a loose upper part reaching to the knees. Several rows of the fringe

[1] Mrs. F. N. Jackson. "Toys of Other Days." Charles Scribner's Sons, New York. (1908)

about this upper garment often ended in tin cones while rows or often elaborate patterns in vari-hued beads indicated the care used in fashioning the dolls. Arms and legs were lifelike and the features were painted in red or black or outlined with tiny beads. The hair consisted of black horsehair fastened to the scalp at one or many places, frequently plaited and bound into beaded sheaths. (Plate II, *a* and *b*[1]) The Seminole Indian dolls, from Florida, were made of wood and clothed in gaudy calicoes in place of beaded skins.

Thus we learn that from early times dolls formed a very important part in the life of their small owners, and too much painstaking effort could not be taken to make them represent as nearly as possible the consummate desires of those for whom they were designed.

Railroad Trains and Boats

The passion for trains overtakes the little boy at about eighteen months and lasts approximately two years, unless it is fostered too much, when it lasts much longer. One should realize that this is merely a stage in his development; that this interest will pass and be supplanted by other interests which are more valuable to the young child, awakening again when the boy is a few years older, when he becomes interested in the complexity of train movement.

[1] The doll in Figure *b*, Plate II, bears a forehead pad in imitation of that used by the Flathead Indians in the artificial deformation of the head of the papoose.

The appearance of an interest in engines is so regular in little boys and perhaps in girls also, just before the age of two, that, judging by analogy, one might almost be ready to ascribe it to some prehistoric interest which man possessed when he was at this stage of his development. But obviously this reasoning is fallacious, and we must seek farther to try to explain it. Moving objects of any sort attracted primitive man very early because they were primarily enemies approaching from his back or side; and they interest to-day's baby when his eyes become adapted to catching images of moving objects approaching from the side, for, looked at directly in front, objects do not seem to move; they only grow larger or smaller.

There is at least one mechanical toy of which I approve, the railroad train, and one-and-one-half years is not too early for a simple one. The child cannot operate it, to be sure, but his delight is keen and he gradually learns to name the prominent parts. Among his first words are liable to be parts of engines. A well-illustrated train book might with propriety be among his earliest books. Electric trains, of course, belong in the second age of interest, when the mechanical interests are paramount, just previous to adolescence.

From the time they were sixteen months old, or when trains first began to interest them, I frequently took each of my sons to the station and to crossings to see engines, etc. at rest and in motion, pointing

out the conspicuous parts, and whenever we were out riding, the little ones were given every opportunity to watch trains, to see roundhouses, turntables, water tanks, switching yards, coal-filling stations, etc. as a part of their early education.

A little wooden pull-toy, consisting of engine and coach gaily painted, gave more pleasure to the two-year-old than many another toy. Combined with the large pyramid blocks, he made trains which could be shuffled about at will. When he was three or thereabouts, I began to draw trains on the blackboard and on paper. I cut from whole sheets of newspaper large engines, coaches, box cars, cabooses, flat cars, with logs, etc., coal cars, oil cars, etc. Eight or ten were cut at a time. Long trains can be laid out upon the floor, the couplings pinned or clipped together. The cars may be pasted to the window glass with transparent paper tape, and if there are two or more windows together, quite a train can be made. This is good rainy-day work for any boy of six or under. When the little fellow reaches four, he will not be content with mother's trains, but will be cutting better ones for himself, with all the details which she left out.

The interest in boats appears somewhat later, and if there is opportunity to cultivate it, lasts much longer. Indeed, there is always a fascination in watching the stately liners move smoothly downstream, as interesting to the old as to the young. Chips, leaves, paper boats, and later on wooden ones

hollowed out with a knife interest boys and girls of any age. Among the interesting toys recovered from Egypt are wooden and terra cotta boats.

The bathtub is in most homes a chief means of gratifying the boat interest. The mechanical boats (which soon lose their "mechanics") are good accompaniments of the daily bath. A book on ships may well follow one on trains, and poems, such as "Wynken, Blynken, and Nod", "Looking Glass River", "My Bed Is a Boat", "Where Go the Boats?", "At the Seaside", from Field and Stevenson may be among the earliest bedtime stories.

Balls

If he has not already had a large soft rubber ball before one year of age, the child needs one now. A parent or an older child can amuse him immensely at first by sitting on the floor, legs apart, a room-length from him in a similar position, and gently rolling the ball back and forth. Rolling, bounding, tossing, throwing, all will probably be learned before he is two. Unusual is the child who does not possess a great variety of balls and know how to use them at the end of that time.

A bean-bag is less easily grasped, heavier, and not as easily thrown as a ball, and perhaps less interesting to the small child; but it later on becomes a valuable addition to his store of playthings.

Leg-power Cars

Even if he cannot operate it, a little car is useful for the child of fifteen months or thereabouts. The child learns to walk by walking; and he will learn to ride by persisting in straddling and shuffling the car about. If he possesses a car thus early, he will become familiar with it and learn to operate it much sooner than if it is presented when the parents think him old enough to ride one.

Just as most adults like the sensation of motion, the little child early acquires this habit, and as soon as he can ride he has an occupation which will interest him at intervals for several hours out of every day until he outgrows the car, only to grow into another, for the desire to go is one that persists.

In winter, when his out-of-doors periods are short and opportunities to exercise are small, he still gets an abundance of exercise indoors and on the porch. No matter how small the home or how many stories from the ground, the small child has in his car an occupation which cannot be surpassed. Trailers of all sorts, which carry dolls, blocks, etc., will early be added to his equipment, only to cause endless worry by getting tangled up with chairs and table legs.

Clay

It is too early to give the child clay or a substitute at two years, but if an older child is supplied with it, he occasionally finds amusement in patting, rolling,

and cutting it with an old spoon or a dull silver knife. He can even make pies in small pans and put them into the kitchen oven to "bake", just as he has seen mother do with her pies.

Clay work is described in a later chapter.

Sand

No matter how many others were playing in the same sand yard, my little boy of twenty-two months would sit in his corner completely absorbed in his own play for an hour at a time, which is a very long period for a small child, pouring sand from one container to another, through coarse strainers, carrying boxes to imaginary playmates, at times talking continually but unintelligibly, and at others talking not at all. But as soon as he would find himself alone, he immediately dropped his play and rushed to join the others.

Sand and apparatus are mentioned more in detail in a later chapter.

Tools

A hammer and a few nails should not be omitted from the occupations of a little boy even of a little less than two years. Girls will probably not be attracted by this occupation, except as helpers, although with few exceptions boys and girls favor the same occupations during the first five years.

It is surprising to see how early a little boy learns

to handle a heavy hammer and to strike true. My son at eighteen months could use a hammer and hit the nail on the head repeatedly. Nothing would give him more pleasure for a short time than a small wooden box turned upside down, with a long crack between two boards of just the proper size to hold nails from turning over while he used both hands on the hammer. The nail moved down at a pace which he could watch and when it was down to the head, he turned over the box and pushed it back.

If a child is taught early to be careful, here as elsewhere, a valuable lesson is learned; a year or so hence it may be much more difficult to teach carefulness.

Notes

A child needs definite rooms to play in and should not disrupt the whole household. This applies particularly of course where there are several children. Access to certain rooms should be prohibited unless accompanied by an older person, and, in order that they may not feel themselves prisoners, they should have perfect freedom of other rooms, where the admonitions "Do not touch", "Do not scratch the furniture", "Do not scrape the floor", etc. are never heard.

Children should not be allowed to take playthings to bed with them, for they tend to excite and keep them awake. If the habit is begun at birth of going

to bed in the dark with no distractions, the little child will not ask for any later on and he will lose no time in getting to sleep.

A child of less than two, indeed, a child of less than six, is completely wrapped up in himself and yet one would not for a moment call him a selfish being; nor should we admonish him for his self-interestedness unless such tends to become abnormal and injurious to others.

Therefore the child needs and courts no interference in his play. If a few playthings are left where he can easily find them and simple directions are given, if necessary, with a new object, the less interference the better. One cannot begin too early to cultivate independence. We are not engaged in raising puppets or playthings for our own present and future amusement — our business is far more serious; it is the cultivation of the highest type of men and women of which we are capable, the men and women who will run the wheels of industry and think the thoughts of the next generation. Our children must enter a world of keen, cutthroat competition and rise above or flounder about upon every wave. We must therefore conserve and cultivate every scrap of independence which we are able to discover; we must cultivate wisely rather than try to smother the child's self-interest; and we must keep the intellect sharp and keen by avoiding deadly monotony. We must strive to steer clear of both the Scylla of monotonous routine and the Charybdis

of scatterbrainedness; and we must try to create depth as well as width of interest.

If one should ask what I should like to see my sons become, I should answer Broad-minded Men. It matters not what occupation they choose, so long as they are able to emerge from the horizon of petty details and see something in the clouds beyond.

CHAPTER IV

THE THIRD YEAR

The year between the second and third birthdays is a wonderful period of awakening to the little child. By this time he possesses considerable skill in the use of his finer muscles, and their control has shifted from the cerebrum to the cerebellum, thus leaving the higher brain area free for further development.

The organs of speech are now under control and the vocabulary is fairly well begun, and the child understands practically everything that is said to him. The special senses are now all highly developed and await a world of external impressions. Up to this time, imitation has been the controlling factor in mental development, but it is now supplanted by curiosity, inquiry, and exploration. And this is the year, *par excellence*, for laying the foundation stones of the character, stones which can never again be moved, whether the architecture of the superstructure be good or bad. And so I have come to feel that the year from the second to the third birthdays is the most important in the whole life and that

it is therefore the crucial year in the training of the child.

Each of us is made up of a bundle of characteristics, which we possess to a greater or less degree. There is a limited number of virtues — wisdom, justice, veracity, fidelity, love, modesty, courage, bravery, and the like, but, as with the ten digits, they may be combined in varying degrees into an infinite number of permutations and combinations, all different, and each constituting an independent human character.

It has been said that if a child is left alone to develop without any external influences, social or moral, the result would be a perfect specimen of mankind. This training, as laid down by Rousseau for his entirely imaginary character, Émile, was actually followed in one instance on record, in the case of the eldest brother of Maria Edgeworth, the novelist, who was trained by his father as nearly as possible in the manner described by Rousseau. The result was a monstrosity, utterly unable to cope with the conditions of the external world, and his life was a total failure.[1]

Thus it seems that heredity without the aid of environment will not develop desirable qualities in our children. Indeed, heredity has been defined as the sum of all environments. The atmosphere of the home is of far more importance in developing

[1] Elizabeth P. Peabody. "Lectures in the Training Schools for Kindergartners." D. C. Heath and Company, Boston. (1888)

mental and moral qualities than is the work in the schoolroom, which obviously stresses chiefly the intellectual side of the child's development.

The character of the parents or guardians cannot but be reflected in the little children who as yet are essentially unmoral and without the will to detect right from wrong. If adults are quarrelsome, petty, vascillating, not scrupulously honest, these traits will become a part of the children's characters — not because they were inherited but because they were of constant occurrence during the years when habits were being formed — and character is largely habit.

After the conditions of the home are such as to promote the child's welfare, then may be introduced factors of less importance, tending toward the better development of the finer muscles and the organs of special sense.

In furnishing the young child with playthings, or, better, "Gifts" for his development, rather than objects for his amusement only (although the two are liable to coincide), the parent does not need a full pocketbook. Indeed, the child is far more liable to injury from a superabundance of objects than from a lack of them, and the most expensive toys are frequently an hindrance rather than an aid to his mental development.

Most mechanical toys come in the latter class and are quickly discarded by the child for simpler things. I once saw in a beautiful home a little attic room

completely filled with expensive mechanical playthings, mostly broken but still covered with fresh paint, which had been discarded by an only child long since grown to manhood. On the floor was a meager handful of dingy, well-worn blocks and jigsaw puzzles which told their own story.

Froebel would give children few objects in order that from them a maximum of training might be gained. I feel that his list is too meager, however, allowing the average child to stagnate and form slovenly mental habits rather than forcing him to keep his mind alert by ever-increasing difficulties. He must enter a world constantly changing, where nimble wits, accuracy, and quick judgment mean his mental as well as his physical survival or destruction; we are not German peasants whose lives are but the monotonous repetitions of those of our ancestors.

On the other hand, we must not fail thoroughly to respect the Froebel Gifts. "Hundreds of well-meaning friends of the kindergarten who have not had time to look beneath the surface, still class Froebel's Gifts with the trivial playthings of the toyshop, and approve him patronizingly as the inventor of ingenious contrivances combining amusement with instruction for their children.

"Froebel's Gifts are serious things, freighted with life, endowed with a soul, and not to be handled irreverently without injury to the thoughtless culprit.

"Let every mother weigh this well, and use the Gifts with reverent regard for the life they hold and the life they bring to growing children." [1]

Thus, many gifts are to be preferred to few, but very few should be available at a time. A small child can rarely occupy himself with one thing longer than from fifteen minutes to a half-hour, when he turns to other occupations, so two or three objects should be placed where he can reach them when he is ready, but no more. After he has begun to tire of these, having exhausted their possibilities for the time being, but not when he has played with them so long as to be utterly weary of their presence, they should be removed from sight sometimes for days, often for weeks, or even — with some things — for months, and more occupational material brought out. He quickly learns that the window seat, the linen closet, a corner of a kitchen cupboard, or his own particular toy closet in his nursery, hold very wonderful possibilities of never-ceasing interest. Christmas surprises and pleasures may be made to last throughout the year, and when he comes back to the old things, they will hold a renewed or even an entirely new interest, for the memory is but short in a child of two or three years.

Among the early playthings should be some that can be torn apart for the pure delight of being destructive. If this desire is satiated now, with simple

[1] W. N. Hailmann. "Four Lectures on Early Child-Culture." Hailmann and Doerflinger, Milwaukee. (1880)

materials, one may avoid serious injury to more valuable things later on, for destructiveness is a trait which must find vent in some manner, at some time in the early development, or be repressed, with possibly disastrous results later on.

Froebel recognized this passion, and Gift Three consists of cubes which can be separated into their constituent parts. After the child is satisfied in destroying the cube, he becomes eager to undo the damage and assemble the parts into a complete whole. The desire to build is somewhat later in appearing than is that to destroy; analysis precedes synthesis.

One of my sons when about three demonstrated this destructive delight rather disastrously. A guest had just arrived for dinner and he was pleased and excited at seeing her. Running about to find something with which, I suppose, to demonstrate what he could do, he spied a platter on the kitchen table, placed ready to receive the roast. He picked it up gleefully and dashed it to the floor into a dozen pieces. Should he have been punished?

The child of this age, beginning to assert his individuality, needs objects which belong to him and to him alone. Besides things, he needs a place to keep his things, no matter how many children there are in the family. Possession should not be construed as budding selfishness; on the other hand, the sacrifice felt in giving away things which are his very own are the beginnings of altruism.

Among his possessions should be a low cupboard or certain shelves in such a cupboard; the pleasure in having a place to keep his treasures leads him to pride and orderliness therewith. A small table and a chair for each child are needed for kindergarten occupations in the home. Folding tables are easily disposed of when not in use, but are usually rather unstable. The chair should not be too small or it will be soon outgrown. For "Forms of Beauty" [1] with blocks and tablets, a table marked off in inch squares is essential. Kindergarten tables thus marked may be purchased or the squares marked off on any small table with India ink covered with a thin coat of shellac. Alternate squares might be inked in solid for ease in placing blocks.

Froebel's Third Gift

Froebel gives the child his third set of blocks at about two years of age. This set consists of a cube two inches on a side made up in turn of eight one-inch cubes. This gift comes also in eight two-inch cubes, the larger size being the better for the young child, because the larger muscles are first brought into play and because these blocks make larger, more impressive structures. "Gift Five" contains, among others, the eight blocks of this gift, so in the interest of economy the latter gift alone may be purchased, using eight of the cubes for Gift Three.

As inverted from the box, the cube represents a

[1] See Wiebe's "Paradise of Childhood."

unit, to be broken into its eight constituent parts and later reunited. If the first sight of the blocks is as one unit, the valuable factor, unity, is gained; if, however, eight scattered blocks are emptied out, the first effect cannot be regained.

"The first careful presentation of the plaything is in union with its purpose, for it immediately gives a clear impression of the complete whole, which is soon seen to consist of separable parts. . . . Nothing is more important than that the first impression of every object should be that it is stable and unified." [1]

The mother does not need to sit near the child and direct his play with blocks, for he should be left to discover for himself what possibilities they hold, even if what he constructs is very simple and disorganized; new days will bring new ideas. The child should at first have no actual help in building, and, while suggestions are permissible, of course, they should be meager rather than profuse.

For guidance of both the mother and child in using Froebel's Gifts in the home as well as in the kindergarten may be mentioned two standard books, both full of detail and thoroughly illustrated, Wiebe's "Paradise of Childhood" [2] and Maria Kraus-Boelte's "Kindergarten Guide." [3] Wiebe gives one hundred

[1] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

[2] Edward Wiebe. "Paradise of Childhood." Milton Bradley Company, Springfield. (1910)

[3] Maria Kraus-Boelte and John Kraus. "Kindergarten Guide." 2 vols. E. Steiger and Company, New York. (1882, 1892)

and twelve positions for the eight blocks in Gift Three, such as fireplace, two chairs, castle, signpost, city gate, church, city hall, locomotive, etc. From these one may readily understand how keen will be the interest and how stimulating to the imagination eight similar blocks may be made. An incident or story adds materially to the interest; and obviously a few well-managed positions at a time are better than attempts to make all the objects mentioned under any one gift.

Hailmann says [1] this gift enlarges the vocabulary, gives control of the finger movements, increases the sense of beauty, the imagination and power of concentration, and lays the foundations of early thought and judgment, for future clearness of understanding, depth of feeling, and firmness of purpose.

Froebel's Gifts have been criticized as making children too serious; they are not noisy, merry, and full of laughter.[2] "But if we hope to train our children in concentration, here is the proper time to begin. A half-hour or more of serious quiet play a day at two years and on is worth untold amounts in later enjoyment and control of himself." [3]

A child nearing three can use the blocks of Gifts Four, Five, and Six with considerable pleasure, using

[1] W. N. Hailmann. "Kindergarten Culture in the Family and Kindergarten." Wilson, Hinkle and Company, Cincinnati. (1873)

[2] Frederick Eby. "The Reconstruction of the Kindergarten." Pedagogical Seminar, VII, pp. 229–286. (1900)

[3] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

not a little constructive imagination in their placements. These will be mentioned, however, in later chapters.

Miscellaneous Blocks

Mosaic blocks in general principle are rather difficult for the child under three, but, if left to his own resources and not pushed, they are valuable adjuncts to the home apparatus for this year. A small set of sixteen cubes [1] comes with one face each in solid colors — red, white, blue, and yellow — with each of the other two faces divided diagonally into two colors. Thus all the blocks are alike, but the combinations which may be made are very numerous. The box is stout and useful for placing the patterns. Simple original patterns will first be attempted, but after practice considerable proficiency in placing the sample designs is effected. If the child is not ready for them, as shown by his lack of interest, they should be removed, for familiarity only breeds contempt; and this axiom applies equally well to most kindergarten apparatus.

A set of mosaic blocks similar to the last comes in thirty-six blocks and may be given with propriety at from three to four years; the smaller set need not be fully mastered and the interest should not have begun to wane before the larger set is presented. When interest is at its height, he is stimulated to further endeavors in the same direction. It is quite

[1] The Embossing Company, Albany, N. Y.

remarkable to what extent a child of between three and four can originate patterns quite unlike those given on the covers but none the less complicated; indeed, I can think of few better mental exercises for a child who is interested than in originating one such pattern after another, seemingly without end. This is by no means mere "busy work", as it may seem to some; it is imagination, originality, accuracy to a high degree. It is interesting to note the comparison between the facility with which a trained child of three to four can handle these blocks and one of ten who has never before seen them or their like. In this Mechanical Age, where quickness, accuracy, and judgment are essentials to our well-being, these qualities may be early engendered by this and similar exercises.

There are many types of mosaics on the market, small solid-color stained diamonds to be arranged on a table but which do not "stay put"; highly enameled wooden tablets cut in various geometric figures and which fit into a flat box; tiny quarter-inch cubes enameled in colors on one face with a honeycomb box in which the pattern is made, etc.

A Peg Board may be classed under blocks, for it consists of slender wooden cylinders, sometimes beaded at one end for facility in handling, which fit into corresponding holes in a board. A ten-inch wooden board with two-inch pegs is not too large for a small child to use. Peg-placing possesses little educational value save to a child just learning to

coördinate his finger movements and to concentrate his mind on one thing. But little can be accomplished in the way of design, and the mere placing of the pegs in apertures soon becomes monotonous to an active child.

Montessori Apparatus

We frequently hear the statement that the Montessori methods may be adapted to the training of Italian children but do not succeed with children in America, with different temperaments. In Italy the training is begun with very young children, while in this country we commence with the kindergarten age or very little younger.[1] Herein, no doubt, lies the chief reason for the criticism. Kindergarten children are too sophisticated for much of the material, but they would not have been so a year or two earlier. Thus, it seems the best results with the simpler devices can be procured only with its use in the home.

Our aim in the home should not be to produce "Montessori children," giving only the standard didactic Montessori apparatus, for I fear the training would indeed be a narrow one; but some of the devices or individual modifications thereof may well form a portion of the early individual guidance

[1] Schools for very young children are coming to the fore, notable among which are the City and Country School and Manhattan Nursery School in New York City and the Merrill-Palmer School of Homemaking in Detroit.

during the pre-school years. Some of the apparatus has stood the test of the years, while some has not. At the end of this volume is a list of books on the Montessori methods, only two of them being in any way adverse in their criticism, but these two should be read as well as the others before an unbiased judgment is formed.

The Montessori materials are rather expensive to purchase, although of course they are well worth their cost; but for the mother with a slender pocket-book and some proficiency in design, as well as the time and interest, crude approximations for some of them, which are transitory in character, may be made at home. The essential principles which are designed by Doctor Montessori to be taught will not have been lost. All the material and apparatus is patented and is sold only by the American representative.[1]

At around two years the child begins to perceive gradations in form and magnitude in two dimensions as well as in three, and the Geometrical Insets are designed to stimulate these perceptions as they appear.

I purchased a sheet of rather thin Bristol board in white and another in red — any color will do as well — using thin board because it does not readily crack. The white sheet was marked off and cut into rectangles about five by six inches, and upon each was drawn and cut out a geometrical figure.

[1] The House of Childhood, 103 W. 14th St., New York City.

One set of six consisted of circles graduated in size; various dishes or a compass may be used for patterns. The cut-out portions were used as patterns for making similar colored insets, cutting these slightly smaller than the white, so as to slip easily into their apertures. On Plate III are shown some of the squares, rectangles, diamonds, etc. as cut, and the Montessori books give the forms as devised originally. Considerable freedom may be used in selecting designs and one does not need to use only simple geometric figures, for in a remarkably short time all will be placed with ease, even by a child under two.

I used such cards first for my son at around three years, but upon leaving them in the room, found his small brother of twenty months endeavoring to place the cards into their apertures independently. At once he grasped the fact that circular cards belonged in circular apertures and straight-sided cards into similarly shaped spaces. Thus curvature he recognized at first. Next he attempted to place large cards over large spaces, a large circle in a large circular space and a large square over a large square or rectangular space. Magnitude came secondly. After a few trials by twisting the card about its aperture he determined whether or not it would fit. This was more difficult to effect, but after a few days of trial-and-error method, he was able to place squares upon squares and rectangles upon rectangles, only thirdly recognizing design. Subsequently the eye took the place of the first method and size rela-

tions were quickly grasped mentally rather than by experimentation.

For use later on, I marked off two sheets of white board into identical rectangles as before, but did not cut the sheets. On each rectangle was marked heavily in blue outlines similar to those previously used, the upper row in circles, the second of squares, and the third of rectangles. The second sheet contained triangles of various shapes and sizes, other geometrical figures, flower patterns, etc. The same set of colored insets served for these two sheets as for the cut rectangles. These large sheets do not become disarranged by the elbow in working with them, but many patterns are confusing to a small child, and they were designed for use on a large table and for an older child. Besides being instructive, the sheets are highly entertaining and form good competitive occupation when small guests arrive. I keep several sheets behind a bookcase for such purpose, the original set of red insets, kept in a small box, serving for all the fillers. The large sheets may be cut into crosswise strips for easy manipulation with a small child, each strip containing one type of figure.

A year later, the same insets are used by Doctor Montessori as a first step in learning to write.

Other Insets

The Inset principle has been used by subsequent educators, but not so much a means of educating

the child as of testing his intelligence. If the original geometrical insets serve any useful purpose in training the young child, I believe the later designs may be utilized as well.

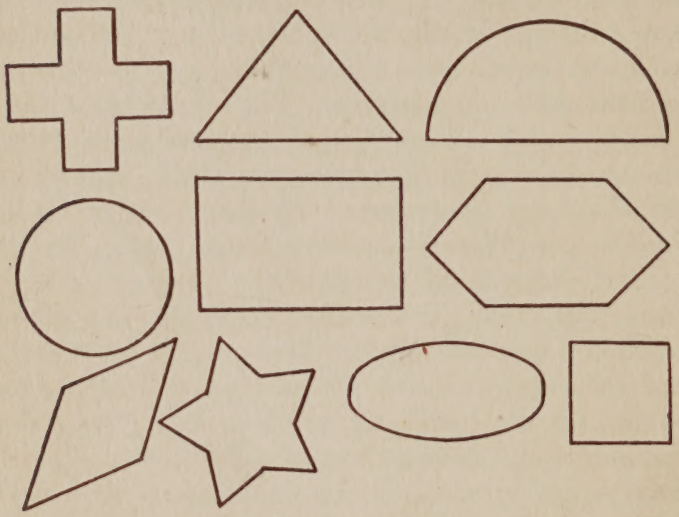

FIG. 7: The Goddard Formboard.

The "Formboard" is used by several psychologists, such as Seguin, Norsworthy, Goddard,[1] Witmer,[2] Evelyn Dewey,[3] etc., each design differing in forms

[1] H. H. Goddard. "The Formboard As a Measure of Intellectual Development in Children." The Training School (Vineland, N. J.), 9; 4. (1912)

[2] H. H. Young. "The Witmer Formboard." Psychological Clinic 10, pp. 93–111.

[3] E. Dewey, E. Child, and B. Ruml. "Methods and Results of Testing School Children." E. P. Dutton and Company, New York. (1920)

or arrangement from the rest. The Goddard design is shown in Figure 7 and also on Plate III. For home use and cut from pasteboard one loses the raised effect of the insets which were originally cut in wood. I cut a rectangle ten by fourteen inches from Bristol board and upon it constructed with compass the eleven figures as shown. The square measures two inches on a side, the rectangle and semicircle two by three inches, the cross two by two, the circle two inches in diameter, the large triangle two by three. Corresponding but slightly smaller insets were cut from colored board.

This set is more compact than the Montessori insets, all the apertures being on one small sheet. Witmer mentions the fact that the circle is the easiest pattern to place. After a little teaching, children of two years three months could place all the insets in three minutes, and three-year-olds in one minute and fifteen seconds. Fifty per cent of the three-and-one-half-year-olds could complete the board on first trial, with no previous showing; seventy-five of those four years old, and ninety per cent of the five-year-olds. The youngest children used the trial-and-error method, generally using but one hand, but the older children used both hands, thus greatly facilitating their work.

The Dewey Formboard bears figures similar to those on Figure 8. This board, like the last, is made of wood with raised wooden insets pasted upon it. Similar insets are given the child to feel and lay

upon the corresponding fixed figures. This set might be carried out in pasteboard, losing, of course, the raised effect.

Fig. 8: The Dewey-Child-Ruml Formboard.

With these suggestions for insets, the mother may devise others for her individual needs, remembering, however, that each of these boards was devised by a psychologist of broad experience.

Puzzles

Cardboard puzzles are still of considerable interest to the child and may be made similar to but more difficult than those used during the previous year. The Bradley animals and birds, fire engine, etc., "sliced animals" often found in the shops, and the color sections of Miss Wrightston[1] already mentioned are constructed with considerable ease. More difficult forms in the Wrightston series may be offered,

[1] Hilda A. Wrightston. "Sense Training for Children's Development." James A. McCann, New York. (1919)

such as those shown in Figure 6, *d*, *e*, *f* (see p. 55), consisting each of three pieces instead of two. They may be made of cardboard, each figure in a different color. The promiscuous pieces for four figures are given the child at one time; two operations are needed to complete the puzzles, sorting out the similarly colored sections and constructing the figures themselves.

Puzzles similar to the last but consisting each of five or more pieces are too difficult for a two-year-old but they might be introduced near the end of the year.

The Sense of Touch

Touch is the oldest of the special senses; even an amœba responds to contact with a foreign object by quickly withdrawing its pseudopodia. The external layer of the simplest many-celled animals is permeated with nerve fibers and cells to receive external stimuli. The other senses, to a greater or lesser degree, are developments upon this fundamental sense.

For the first few months of a child's life, this sense predominates over the other four, being gradually superseded by them, but it may be stimulated externally and utilized to a certain extent during the early years instead of being relegated to the background. The sense retains its dominance longest in children of retarded mental development, and judicious methods for its further development form the best

means of educating feeble-minded and subnormal children. In many respects, however, backward children are trained along the same lines as normal children who are a few years younger.

Rousseau recognized the value of training the sense of touch in normal children. He says, "The child must learn to feel the warmth and coldness, the hardness, softness, and weight of bodies; to judge of their figure magnitude and other sensible qualities, by seeing, touching, hearing, and particularly by comparing the sight with the touch, and judging, by means of the eye, of the sensation which objects would make upon the fingers."[1]

Following the lines laid down by Seguin for the training of backward children, Doctor Montessori has transferred his methods to normal children and has devised didactic apparatus for stimulating this sense.

This apparatus frequently meets with but little success in this country, chiefly, I believe, because it is introduced into the kindergarten, after the other senses have become markedly awakened, and not into the home, when the child is two years younger and when the sense of touch is paramount.

In order to cultivate the two-year-old's touch sense, lightly blindfold him and place in his hands one at a time some of his larger familiar toys, such as top, horn, book, engine. Then use teaspoon,

[1] F. V. N. Painter. "History of Education." D. Appleton and Company, New York. (1886)

baby spoon, tablespoon, clothespin, pencil, etc., objects which have somewhat similar shapes. Gradually work up to finer sensitiveness, such as differentiating shapes in blocks, cubical, rectangular-faced, triangular-faced, round and square-ended columns, etc. Then try large and small cubes, spheres, etc., and then those of approximately the same dimensions. Gently lead him blindfolded to a chair, a table, the wall, a piano, etc. and ask for his impressions.

If one attempts only a few trials at a time and keeps the child in a happy mood, he will look forward to this little game with considerable pleasure and be eager to name the various objects. At first, of course, the vocabulary will be inadequate to describe objects or name them, but vocabulary and touch-perception will grow hand in hand. This exercise may be used at intervals for at least two years.

The Montessori material for the early cultivation of this sense consists of graded strips of sandpaper which may be purchased or made at home. Purchase from a hardware store successive grades of sandpaper, which are numbered on the back, and cut from each a rectangle of convenient size for handling, say two by four inches, and keep the strips together in a small box. Two strips of each grade allow for variations as given below. At first, the child may be asked to grade one set with his eyes open, laying the strips side by side in proper order. Then the

strips may be matched with those of the duplicate set, placing the latter on the top. Then each exercise is repeated blindfolded. For checking purposes, a set may be made and glued in proper order to a sheet of Bristol board; this makes the child's work self-corrective.

Home-made Toys

"The function of toys is to serve as lay figures on which the child's imagination can weave and drape its fancies." [1] Therefore simplicity is the aim, rather than elaborateness, which seems to be so much the easier to attain. "The true plaything is only a distaff of flax from which the soul spins a many-colored coat. It must be indefinite, capable of many transformations and able to act many parts. Only thus can it fulfill its twofold mission — to stimulate creative activity and satisfy the hunger of the soul for the ideal." [2]

Home-made toys probably leave more to the imagination than do most purchased ones and for this reason approach more nearly the ideal. They are in general more transitory in character, but this does not detract in the least from their value.

A child of from two to three years is unable to construct toys for his own amusement, but the desire

[1] Frederick Tracy and Joseph Stimpfl. "The Psychology of Childhood." D. C. Heath and Company, Boston. (1909)

[2] Susan Blow. "Symbolic Education." D. Appleton and Company, New York. (1911)

to do so is already developed. Half a dozen candy boxes make a splendid train, shuffled from the rear. Soon, he will want to draw the train, rather than push it, and the cars must be fastened together; then the ends may be sewed loosely to allow for curvatures in the track. The engine may be differentiated by blocks piled in the first box. Another step in the development of the train idea which will occur to him is that of attaching the string of cars to the rear of his little wooden car and becoming his own engine motive power. Spool wheels can be fastened on the boxes with wire, or nails can be driven into little strips of wood, which may be glued to the underside for trucks, and spools fastened thereon.

A small wooden box, a cigar box, for example, may possess similar wheels and be used as a cart to hold dolls, blocks, etc., fastened by a string to his small car. A somewhat more elaborate box made by an older person may possess a strip of wood for tongue, and cart wheels cut with a circular saw and painted gaily; such a box may serve for a doll carriage for a year or so, or even until the little girl has seen the elaborate wicker ones of others.

Clothespins make log houses and fences, and toothpicks make flat houses and some of the letters which the child is only just beginning to recognize. A small basket and a few clothespins amuse for short intervals. One of my sons would sit in a small clothes basket and shuffle himself about, like Wynken, Blynken, and Nod, in search of the herring fish that

lived in the beautiful sea. A promiscuous group of pasteboard boxes and cartons with their covers keeps a two-year-old interested for a short time at intervals and is of value in developing system and accuracy.

Miscellaneous Occupations

Games. The child of less than five or six has little interest in competitive games; he is as yet exclusively individualistic, and practically all of his occupations must be those suited to individual use.

There is on the market a series of so-called games which are instructive to a child of even less than three, as well as to older children, but which can be used alone. One set[1] consists of five or six cardboard sheets containing birds in color, with the heads on removable circular disks. It is no small task to fit some sixty promiscuous heads upon the proper bodies, and one that requires considerable intelligence as well as mechanical ability. The Montessori insets, already described, are a good forerunner to this occupation, and with this preparation the small child in a surprisingly short time will have become able to place most or all of the heads correctly and to name with but little effort the birds themselves, either from the heads or the bodies.

Other sets in the same series consist of decapitated animals, flowering plants, nature stories illustrated with butterflies, trees, etc., which fit only into their own respective apertures. One of my sons could

[1] Ideal Book Builders, Chicago, Ill.

place and name all the birds at two and one-half years, and his brother at twenty months was able to place correctly the dozen or more insets in a "Nature Play" set.

A fair substitute for these sets may be made at home. For the flowers, cut out colored plates of flowers, etc. from several seedsman's catalogues and mount upon thin cardboard. Select from each plate several single flowers, isolated if possible, so that backgrounds may not be of assistance to the child in placing the insets. For animals and birds, one might draw outlines on pasteboard or watch for the appearance of groups in magazines. Perry pictures might be utilized.

Sewing. When mother is darning stockings, the two-year-old wants to help, and a wad of soft cloth, a darning needle, and cotton or wool yarn properly occupy their place in the sewing basket alongside more prosaic things. A string of large-eyed buttons or button molds, a dull needle and stout cord are interesting for a few minutes at a time.

Bead-stringing, like button work, is a deadly occupation if long continued. It soon becomes monotonous to an active child, who will promptly drop it, but for a rather sluggish child who likes it, it should be strictly avoided; this is just the type of child that needs stimulating, not stagnating occupations. Except for beginners and those who need better muscular and mental coördination, it should be utilized warily. Large wooden button molds,

plain or colored with dyes at home, may be used at first, strung on shoe laces with metal tips. Numerous sets of large wooden beads are on the market.

To put a kindergarten child at work with a cambric needle, fine thread, and a box of tiny beads keeps him occupied and out of mischief for a comparatively long time, to be sure, but it is a very unwise teacher who does so. The first day my son of four was in kindergarten, he came home with a six-inch string of tiny glass beads, overjoyed at the result of his handiwork. Small glass beads have no place in the training of any child; they are difficult enough for an adult to string.

In all children's occupations there must be sedulously avoided any trace of eye-muscle strain, for the young child, like his prehistoric forebears, is a far-sighted animal.

Scrapbook

When a child is less than three, it is rather early to commence the making of a scrapbook, but the mother's trouble is already amply rewarded by the growing interest the small child takes in a few selected pictures. If a good-sized, substantial cover is made now, it will answer for several years and will only need additional leaves as the child grows older.

I constructed one measuring about twelve by eighteen inches, with covers of Bristol board over which was sewed a gay cretonne. The leaves were of unbleached muslin, overcast on the edges and cut

twice the eighteen-inch width and folded. The book was bound loosely with a separate piece of the cretonne which could be removed when additional sheets were added. Cloth stands hard usage, does not curl or tear, and may be wiped with a damp cloth when soiled.

Numerous suggestions and illustrations of scrapbooks may be obtained from Mrs. Nash's "Children's Occupations." [1]

The first pages will naturally contain colored pictures of babies of all sorts and descriptions, human, feline, and canine probably predominating, many taken from magazine advertisements. As the child's interests widen, the range of pictures grows also, and the wise mother will develop each interest as it appears. One double page may be devoted to railroad trains, another to boats, still others to airplanes, flowers, animals, etc. Hallowe'en, Thanksgiving, etc. offer still further opportunities for development.

Nature Study

Froebel's devotion to nature was intimate and lifelong. His childhood home was beautifully situated in the Thuringian Forest, and "Nature, the world of plants and flowers, so far as I was able to see and understand it, early became an object of my observation and reflection."

[1] Maude A. Nash. "Children's Occupations." Vol. II of "The Kindergarten Child's Hour." Houghton Mifflin Company, Boston. (1920)

As a result of his early love for the beautiful in nature, gardens and animals formed a very large part of his system of child-training. We are very apt, fifty years after his death, to lay stress upon the Gifts and Occupations, and to forget the contact with the outdoors, which is equally important. In the Montessori schools, the care of window plants forms an important link in the system of training little children.

Most of us have a love of nature to some degree, but, unlike Froebel, we need to have things pointed out to us before we are able to see beyond the surface. Many a farm lad knows nothing of the wonders and complexities of life as it exists in the little pond to which he takes his cows to drink, but if some one would only take his hand for the first few steps, he might go on seeing for the rest of his life, never exhausting its possibilities. There are few things in nature more fascinating than an ecological and systematic study of the minute fauna and flora of a tiny meadow pond.

Nature study cannot be begun too early in life. The little fellow of less than two eagerly watches for the birds to come and eat the crumbs which his mother may have thrown out upon the back lawn or placed on a shelf provided for the birds, and before many months he will probably be placing the crumbs there himself, with no suggestion from mother. Even if only sparrows can be induced to feed, it is worth while cultivating their acquaintance in winter,

when there are little folks in the home; otherwise, of course, they are pests not to be encouraged.

In the spring he will delight in watching the robins pulling long worms out of the lawn, and still later with nesting activities, if he is fortunate enough to have a bird house to watch. Late in summer, there are the lovely goldfinches to see and hear as they rob the sunflower heads of their seeds before they are ripe. Even a tiny yard may well contain two or three coarse sunflower plants for just this purpose.

Repeated excursions to the park or forest teach the three-year-old to recognize six or eight birds at sight, red-headed and downy woodpeckers, flicker, robin, crow, mourning dove, nuthatch, bluebird, etc. When he is four, the list should be considerably longer and the songs and calls as well as the habits and possibly nests recognized. After a good start, all mother will need to do will be to answer multifarious questions as they arise, for the interest in birds, as in all nature, when once aroused, will last undoubtedly for life.

Collections. A box containing a dozen or more each of various large dried seeds, squash, beans, corn grains, lima beans, peas, persimmons, is interesting to sort into piles and to be used in making simple patterns, although the latter is rather difficult for a child of under three, for the designs do not "stay put."

A box containing nuts — English walnuts, filberts,

pecans, hickory nuts, acorns, Brazil nuts (really seeds), etc. is better than seeds at first, being larger, smoother, and more tangible. These collections should only be brought out at intervals, and singly, to avoid a general mêlée with a consequent speedy loss of interest.

The busy mother might give the child a handful of corn and wheat to sort into two piles, and thus keep him occupied and quiet for a long time; but she would be a very unwise mother, indeed, if she did. No more perfect means could be devised for making a stupid child and a stupid man, unless, perchance, poking beans through the canes of a chair be done instead. And yet both these occupations were suggested by a well-known woman writer for the farm child in winter time. Stringing a quart of soaked peas and clipping clothespins on a long, narrow board were other suggestions offered.

A collection of pine cones of various shapes and sizes makes an interesting half-hour for the three-year-old who loves to feel and see beautiful objects, but they are fragile when dried and may soon be a pile of débris. Show him the delicate seeds within the scales, which are such valuable food for the cross-bills in winter time.

Cocoons sought for, brought in, stored in sunny places, and watched in early May for emergence, reveal one of nature's wonders in a beautiful manner and one not soon forgotten by a child of any age.

Literature

The first book beyond the flexible animal, train, and boat picture books is of course "Mother Goose." The editions of this first classic are legion and one should not invest several dollars in one without first comparing several. Many libraries keep fine editions of the children's classics expressly for parents and others to inspect, and not for circulation, and the larger bookstores issue before Christmas time graded lists of new and old editions of children's books, often with comments, which are very useful. Choose an edition with sprightly illustrations of children doing interesting things and with not too much detail. What appeals to adults by no means always pleases the children, and in choosing their first real book, allow their judgment some weight.

Before giving the child the book, go through it carefully and if necessary destroy any illustrations which might frighten the child, give him food for bad dreams, and help to make him afraid of the dark, for even the best editions of many children's books contain grotesque, startling figures.

Small groups of Mother Goose and other rhymes are frequently made into elaborate editions and illustrated by the best artists of children's books, such as Leslie Brooke, R. Caldecott, Kate Greenaway, and Willebeek LeMair.

Shortly after two years, the child becomes no longer satisfied with a Mother Goose diet; he is

ready for stronger mental food. In several book lists for children, Mother Goose is placed at four years, but at four years of age a child should know the contents of a score or more of classics in place of one!

Closely following Mother Goose come the little fairy stories, Red Riding Hood, Goldilocks, The Three Bears, etc., among the best editions of these first, simpler fairy stories being: "The Golden Goose Book", illustrated by Leslie Brooke; "Old, Old Tales Retold", illustrated by F. Richardson; and "Little Red Riding Hood and Other Stories" by Andrew Lang. Among the most beautifully illustrated of all early picture books are many from Scandinavian, French, and Italian sources, which may frequently be found on the Parent-Teacher shelves of libraries.

It is not too early during this year to read to the child one or two of the exquisite little Beatrix Potter books, "Tom Kitten", "Squirrel Nutkin", "Peter Rabbit", etc. Each picture in these books is a gem, containing much of interest, and the series will not be outgrown for several years. One might wish only that the bindings were not so frail.

Poems are the form of literature *par excellence* for young children. The poet is always a child, and every child is something of a poet, if not in expression at least in appreciation. Rhythm early appeals, and it is astonishing to note how readily a child of two years learns the words of long poems, most of which

he does not understand. With but little stimulation on the mother's part, the child is soon able to recite whole poems after her, possibly without understanding what they are all about; the swing of the words, the jingle of similar sounds at the ends of the lines are enough for him. A few years, or even a year or so later, there will not be the same response and so this early period should be utilized to its fullest extent in the memorizing of suitable short poems.

Poems form the best bedtime stories for little folks, for then in the darkened room the mind is most receptive. Many of the poems of Field and Stevenson are splendidly adapted to this purpose and they help to lull the child to sleep rather than to stimulate the imagination, as do many of the so-called bedtime stories. Thus two of the child's earliest books should be illustrated editions of "Poems of Childhood" and "The Child's Garden of Verses."

CHAPTER V

THE FOURTH YEAR

The child crossing the threshold of three years possesses a much broader horizon than he did at the beginning of his second year, and the increase in moral and mental development during the year from the third to the fourth birthdays is probably greater than during any other single year of his life. During the previous year incipient characters were revealed; during this year they are developed.

By this time the child has become sensible to the existence of right and wrong, to truth and falsehood, and his individual traits have already indicated the trend of his character. His curiosity has become more or less satiated, for he is now able to move about and discover things for himself; he has a rapidly increasing vocabulary of several hundred words, and not only can he think thoughts but he is able to express what he thinks. His higher intelligence has come to the fore, eager to find nourishment, and all the parents need to do is to set before him appropriate mental food and he will select and absorb that which he most desires and which, like physical sustenance, is generally what he most needs.

But it is no simple matter for the parent to choose the wisest nutriment or to select it at the time when it best can be assimilated; fortunate, indeed, is the child who has given him just the proper mental stimuli at just the proper stages in his development. These needs should be slightly — but only slightly — anticipated; if things are presented too late, they fail permanently to create interest; if too early, they will merely meet with apathy, later to be developed into interest.

Nothing can supplant the personal guidance of wise parents, and the best apparatus and material given him will be useless, indeed, if they be not accompanied by a personal love and a watchful interest. Every parent of young children should read occasionally on the subjects of Child Training and Child Psychology (see lists at the end of this volume) and become familiar with the shelves in the city library numbered 150.2, 371, and 372. No one is all-sufficient to guide his children without an occasional renewal of enthusiasm in this most important of all subjects, the welfare of young children.

The wise parent needs rather to expend thought than money in order to furnish the best mechanical aids to a well-rounded development; much of the best material for children's use is so simple that it is overlooked in the search for costlier, more attractive things. Pictures which most attract the adult in children's books are generally not the ones which children love the best, and, likewise, toys which

fascinate the adult are often quickly discarded by the child, to the parent's consternation. "An old German toymaker, when asked where he got the ideas for his playthings, once answered with a half smile, 'Not from the children, anyway. Children seldom get the toys they want but those that their parents want them to want.'" [1]

The child is not a small-sized man; his interests and outlook are entirely different, but, unfortunately, this conception of childhood is frequently unrecognized or ignored. We try to understand our children in the light of our present, adult, states of being, and if they do not conform to our preconceived notions, it must be the children who are at fault, rather than ourselves. "People do not understand children," says Rousseau (1712–1778); "they are always seeking the man in the child, without reflecting what he is before he can be a man." [2]

Gift Four

One more of Froebel's Gifts is designed for use in the home; and the others are chiefly for kindergarten use unless, perchance, the mother is training the child at home during his kindergarten period.

Gift Four consists of eight brick-shaped blocks, two by one by one-and-one-half inches, which, as

[1] Nora Archibald Smith. "The Home-Made Kindergarten." Houghton Mifflin Company, Boston. (1912)

[2] F. V. N. Painter. "A History of Education." D. Appleton and Company, New York. (1886)

poured from their container, make a two-inch cube.[1] Like Gift Three, this set comes in an enlarged size with blocks four inches in length. These bricks are less stable than are the inch cubes (Gift Three) and require more care and accuracy in construction work. From them, using all the blocks each time, the child may make a flat floor (broadside), high wall (on ends), low wall (on sides), a bathtub, sofa, table and two chairs, tunnel, a tall well shaft, a pyramid, a winding stair, etc., the latter objects becoming less stable.[2] Movement is illustrated by placing the blocks on end in a row, one behind the other. When the first is tipped, all fall. Other placements can be made so that when the key block is tipped, all fall simultaneously. Dominoes answer equally as well as the blocks.

As with the other sets of blocks, of course, the child should be left alone much of the time to develop his own structures, and by this time he will be able to construct objects from simple directions. Little stories may be dramatized for him with the blocks, — "The Three Bears", "Red Riding Hood", "Rapunzel", etc.

Each time the blocks are to be used, the child should be made to understand that clean hands are a prerequisite, and after he is through the blocks

[1] If subsequent Gifts are to be purchased, it would be well to buy Gift Six now and use eight of the blocks in this instance.

[2] "Paradise of Childhood." Milton Bradley Company, Springfield, Mass. (1910)

should be replaced in their container. One doesn't have to emphasize these points many times with a young child before they become habits.

"At the beginning of his third year, solid and rigid playthings begin to be replaced in two ways. In the one by matter still solid, but impressionable, such as soft clay, wet sand. In the other, by less solid things, as tablets, smooth paper, sticks, and threads; later by . . . slate and slate pencil and lead pencil or crayons; and lastly by colored liquids and pigments."[1]

Drawing

The little child's aimless scribbling takes on a definite purpose before three years are reached. The first object he draws is a man, with a round head, two eyes, and two legs; later comes mouth, then nose, hair, ears, etc.; profiles scarcely enter the small child's compass at all. Most early drawings are of animate objects.[2] Mothers may readily check this statement by observation and note discrepancies with the individual child.

With a child commencing the use of a pencil, colored crayons do not appeal; the mere pleasure at seeing lines appear through his own efforts is enough. It is not until he has gained some proficiency in managing a pencil that the desire for crayons comes.

[1] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

[2] G. S. Hall. "The Contents of Children's Minds on Entering School." E. L. Kellogg, New York. (1893)

Since this passion, for such it might almost be called, comes unaided, it should be judiciously abetted. After he has begun to draw men, mother might draw simple human figures with little detail for him to copy, then members of the immediate family, the home, garage, dog, etc., branching out gradually into little dramatic situations, such as Red Riding Hood, Mother Goose simples, etc.

All suggestions must be made with discretion, however, and if the child shows ability to use his own imagination, all help should be withheld. Self-help is best, but we as mothers are liable to err on the side of too profuse assistance.

By gently stimulating the desire to draw, we are not aiming to make precocious artists of our children, and whatever talent may seem to appear should not be regarded as budding genius but merely the intelligent pictorial expression of their thoughts. Children at four will attempt to draw situations which would not occur to them to express pictorially at eight. "I can't tell you about it, mother, but I can draw it for you." Haven't we all heard this expression at some time?

At three years of age one little boy drew kitchen utensils, chairs, stove, windmill, house, trolley, engines copied from books, cat, bridge with engine, clock, boat in the water, elephant, and pig, surely a remarkable attainment.[1]

[1] Louise Hogan. "A Study of a Child." Harper and Brothers, New York. (1898)

A certain little boy attended his first "movie" at four and one-half, "Long Live the King!" When he arrived home, he immediately repaired to the library without a word, and came out in a moment with a drawing of the last thing he had seen on the screen, the little king on his throne with his crown on his head, staff in his hand, and a long train on his robe. After silently holding it up a moment for inspection, he returned and soon came out again with another drawing, an after-thought, of the little king dancing on the table which was surrounded with chairs, the seated people being beyond his power of expression.

"It is in drawing and painting . . . that he (the child) finds the most delightful and satisfying mode of expressing his ideas. Hence the cultivation in the child of the power of drawing is one of the most essential means of educating human nature both in the individual and in the race." [1]

Clay Modeling

Clay modeling is less interesting at first, perhaps, to the young child than is drawing with colored crayons or dabbling in liquid pigments. Savages delight in bright colors and prehistoric man (Cro-Magnon and allied races) executed animal paintings in color and bas-reliefs as depicted on the walls of caverns in Southern France; similar animal paintings

[1] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Edward Arnold and Company, London. (1912)

in color decorate the walls of many cliffs in our Far West, the work of prehistoric Pueblos, Navahoes, etc.[1]

Painting may appeal to us without greatly stimulating the intellect, but an appreciation of sculpture always demands exercise of the higher faculties. The fashioning of curves, the gradations of depth, in these must the motive be expressed, and one must frequently read much into a work of marble before he can attempt to get a little out.

And so, if only to form the rudiments of an appreciation of plastic art, clay modeling is valuable. One is certain to procure the necessary training in some line to earn a living, but in so doing he is liable to miss the higher things in life. How best to occupy the hours between work and sleep is one of the great problems of our time. I feel that if the little child is early surrounded with aids to his cultural development, they will never be lost.

Modeling with clay is not a new art which our children are learning for the first time in history. Clay animals (birds, turtles, and crocodiles) made by children have been found in prehistoric Egypt, before 5000 B.C. and numerous examples exist from the twelfth Dynasty, 3500 B.C. "modeled out of the universal Nile mud." [2] The children of the ancient

[1] In 1923 there were discovered by Norbert Casteret in caves of the Pyrenees numerous three- to five-foot statues in the round of prehistoric animals and done by prehistoric artists.

[2] W. M. F. Petrie. "Diospolis Parva." Egyptian Exploration Fund, London. (1901)

Athenians used clay and wax for molding, and "if we might judge from the rudeness of many figures which have come down to us we should find in them the work of childish hands." [1]

Clay work is sometimes criticised as being a more or less superficial offshoot of the process of education rather than a factor in the line of development, but the fact that sculpture has played so important a part in racial development indicates its value in training the individual child. And without doubt work with plastic materials can be called sculpture, however crude the results may be.

To the child, the presence of three dimensions may be at the same time simpler and more difficult for the expression of his thoughts than two-dimensional work with crayons and paper. He must not be allowed to attempt the construction of difficult objects; his interest must be skilfully developed before there occurs familiarity with and then contempt for the nondescript mass, his interest lost forever.

The plastic medium appeals to him because most objects with which he is familiar have length, breadth, and thickness. A clay-modeled cow looks more like a real cow than does its outline on paper; the latter is the symbol only, which takes the place of a cow, while the latter is a real, though diminutive, cow. But when he attempts to make a clay cow himself,

[1] Percy Gardner and F. B. Jevons. "A Manual of Greek Antiquities." Charles Scribner's Sons, New York. (1885)

the three dimensions represent a more difficult problem in expression than does the scrawling of the four-legged creature on paper.

A brightly colored modeling material like Plasticine is better than clay, for it appeals through the eye and thus a first interest is created. It does not crumble or get under foot, no water is needed, and it yields readily to pressure from little fingers, stays put, and may be used many times. Plastic work is much better for small children than dabbling in water colors; it tends to develop the æsthetic sense to just as great a degree and eliminates the water medium which small children do not have the requisite skill to handle.

The English Plasticine and the American Plasteline differ but little. The latter is worked a little more readily but being softer does not hold its shape so well when modeled as the former. Each comes in cylindrical bars weighing one-half pound and in many soft colors; a pound costs around fifty cents and lasts indefinitely. The separate colors sooner or later become so hopelessly intermingled as to lose their æsthetic value, but, nevertheless, I believe the purchase of separate colors the better advice. If little hands are clean, and it is kept off the floor, away from rugs and dust, it will remain fresh and clean.

The child of two delights in pulling a mass into bits and crushing them together again, but his interest is not long continued. A little later, however,

he will obtain genuine pleasure from rolling out long "angleworms" and transforming them into spiral "millipeds." Then he can roll out thicker cinnamon rolls and put them into the oven on his little patty pans. These small pans may be used for "mud pies," and leaves of various forms or the skeletons of leaves may be pressed upon the top for patterns. Small baking-powder can tops make biscuit cutters.

For the beginner, a single color is best, but, as the child develops proficiency and interest, several colors are interesting for combination. I should not advise making letters and figures in clay, for the results are sure to be crude. The little child needs rather to be taught his letters from perfect representations. The muscles used in writing and those used in modeling are not the same, and so clay letters are not a step in the art of writing.

A simple construction which the child can execute alone is a bird's nest. A robin's nest is easily hollowed out from a gray mass and three pale green eggs deposited therein. Mother may be required to model the bird to sit on these eggs and be admonished to make the bird's base large enough to cover every particle of egg in order to keep them warm so they will be sure to hatch.

He can help mother make a market basket by rolling out long thin strips, using both hands to expedite the work and make the rolls more even. The bottom of the basket is made from a spiralled mass laid flat and the sides built up from a continuous

rolled-out strip pressed lightly together. A handle is made from twisted strips pinched on the basket. Two colors twisted make a pretty variation. The basket may be made of flat plaited strips, cut with a knife, and woven together in contrasting colors. For contents, the child may model eggs in white, potatoes in gray, carrots in orange, beets in red, etc., if all these colors are available, using, however, vegetables adapted to the colors at hand and those of form simple enough so that the little hands can do most of the modeling.

Little balls can be rolled out in the hands and flattened to form wheels which may adorn any number of vehicles — engines, automobiles, etc., and if he is a wide-awake boy will soon be demanding the details that go with these vehicles, — steam chest, sand dome, coal, driving wheels, closed body, radiator cap, etc., not to mention the engineer and chauffeur. Dogs and cats, fish, dolls, etc. will test the parent's ingenuity and afford the child much delight.

With mother's help a little tea party can be staged. The child can make the table legs while mother models the top; he can roll out tiny chair legs and crosspieces which mother will fit together; he can flatten out tiny plates and saucers and roll out cups (for mother's completion, with handles) while, working together, the dolls can be modeled to sit at the various places.

One boy made and then pressed upon the window-pane a Baltimore oriole's nest suspended from the

limb of a tree. The idea, color scheme, and most of the construction were those of the nearly four-year-old while his mother made the bird to sit on the nest. The tree was in gray, the two sturdy limbs in green, the deep nest and its hangings gray, with three green (?) eggs, and a yellow bird sat rather cramped, deep down in the nest. The tree limb was not strong enough to bear the heavy weight and the windowpane was called upon to assist. The same lad often made prettily colored flowers and pasted them upon the glass, forming a variegated Plasticine bouquet.

How much nature study as well as muscular exercise, æsthetic training, conception of form and structure can be gleaned unknowingly from an inert mass of plastic material! I wonder how many mechanical toys at fifty cents or six times fifty cents could furnish the genuine pleasure of a pound of clay?

An old case knife is valuable even for the young child to use in cutting up the mass into pieces small enough to handle. Silver is quickly tarnished by the substance. A bone hair pin is efficient as a tool for mother to use in making grooves, wheel spokes, eyes, leaf veins, fish fins, etc., but no instruments should be used by the young child, for hand and finger training is the object sought and not perfection of the modeling. His first work may be so crude that the parent cannot recognize the object, but, just as with his line drawing, to him it is a perfect representation.

A variety of spatulas is sold by Bradley for assistance in modeling, and these are useful for older children.

Combinations may be made with Plasticine and toothpicks, matches, feathers, raisins, etc., amusing but not instructive and hence better omitted. As with drawings and illustrations in books, the less detail one puts into the models the better. Fine workmanship confuses the little child; it obstructs the path between object and imagination, and it is imagination, above almost any other mental trait of childhood, which we most wish to preserve. Imagination is one of the most precious but most elusive, and at the same time one of the least conserved characteristics in children. How many more great researches in science and inventions and conceptions in Art in its larger meaning might result if more parents cultivated assiduously their children's imaginations?

Sand

The desire to dig in the earth is probably as ancient as mankind, and it very early develops in to-day's baby. Sand was a medium of play enjoyed by the children of ancient Greece.

Professor G. S. Hall's article on one sand pile [1] is almost a classic and still often quoted, although written thirty-five years ago. He shows how the interest grew until it involved a whole community

[1] G. S. Hall. "The Story of a Sand Pile." *Scribner's Magazine*, III, pp. 690–696. (1888)

of children, each one contributing something to the wealth of detail, until it included wells, tunnels, hills, roads, capes and bays, with imaginary water, mines of coal and ores, farms with houses, barns, animals, and fences. This community sand pile existed for years, and the interest was lost only as the children grew into adolescence.

A pile of sand in a quiet spot may form one of the best influences in the early years of the town-bred child, for it is soothing to the nerves and tends to overcome the noises and distractions of the city. It develops in the small child the habit of keeping off the streets and in his own yard, a habit which grows more important every day as city life becomes more complex. It stimulates the imagination, offers constant suggestions for new occupations, and gently exercises the whole body.

My children have two sand piles, one under the back porch and one in the basement, so that, winter or summer, rain or shine, they are not denied this pleasure. We purchase a cubic yard of fine sand each spring and distribute it in the two places, cleaning out the old and using it for mixing with the soil in the flower borders. An exposed pile is to be preferred to one under a porch, however, for after a rain it dries out more readily. A large box can be made with a board around the top for a seat and work table.[1] In summer, the pile should be in the shady

[1] Folder No. 2, "Backyard Playgrounds." Children's Bureau, U. S. Department of Labor, Washington, D. C.

part of the yard, near the garage, under a tree, or under a large umbrella. If the pile is under a porch, it can be supplied with a lattice gate, closed when not in use in order to make it inaccessible to cats.

The basement sand should be placed in a well-lighted corner, where windows can frequently be opened in winter, and the sand kept in place with boards. It becomes dry and dusty and needs sprinkling before the children play in it. When the mother is busy in the laundry, this forms a convenient and safe play-place for all but the tiny baby.

Old fruit baskets of various sizes, smooth-edged tin cans, wooden pails, shovels, stout pasteboard cartons, clothespins, old tablespoons, large wooden spoons, sifters, colanders, etc. afford the child both mental and physical exercise of the best sort. Glass bottles are to be rigorously avoided, for, tempting as they are, they are sure to become broken sooner or later and the sharp pieces are most difficult to find. Most of the sand apparatus found in toy departments is impractical and soon goes to pieces. The little carriers get out of order and the child loses interest in their monotony only to resort to his own variety of containers.

My little sons one day attempted to move their under-the-porch sand pile out upon the lawn with tablespoons and little wooden pails. They worked silently and independently for almost an hour before another interest took them away. The next day,

strange to say, they became just as fully engrossed in moving it all back again.

Paper Cutting

The desire to cut paper comes before the ability to handle scissors, at around two years.[1] Scissors and colored advertisements from household magazines seem natural accompaniments. At first, both hands are used to cut with, and assistance is necessary to avoid discouragement at the outset. However, the child soon becomes proficient with one hand only, using the other for holding the paper.

If the mother would use only blunt-pointed scissors for ordinary household purposes during the years that the children are small, there would be saved the worry of possible accidents. Manicure and other small scissors should be kept out of reach and, more important, out of sight, so as not to whet the curiosity.

If accuracy in cutting need be taught before it comes automatically, commence by using attractive plain paper, tinted wrapping paper from drug stores, for instance, or the colored squares purchased from supply houses. Rule straight lines across the paper and have the child cut out the strips. Encourage his efforts, even though the results are poor. When

[1] Many of the remarks in this section apply to the third year and still others to the fifth, but, for compactness, all are grouped here as one of the less important interests, sure to develop with little or no assistance at one time or another.

results are good, paste the ends and make a little chain of them. From the package of squares, varihued strips may be cut to form an attractive chain which the child will delight to use in decorating the chandelier or the pictures on the walls.

Rule off squares and triangles, and when straight-line cutting has been learned, draw a curved line and circles of various sizes with cups, saucers, plates, etc. for patterns. Then, if the parent is proficient in outline drawings or possesses a set of animal stencils, outline various objects for his scissors.

The first lesson in geography may be illustrated in paper cut-outs. From inexpensive typewriter paper the mother may cut a house with windows and shutters, with a separately cut out and creased porch, with vines and shrubs cut and laid in place, plants in round flower pots on the floor, members of the family arranged around or in the house, the dog, cat, garage, and car, if he is a city lad. An interesting format for the farm can be made, placing animals in their barns, coops, etc., with windmill, silo, house, etc. As the horizon broadens, one might cut out cocoons, larvæ, and butterflies; bees, beehives, and honeycombs; nests, eggs, and birds; sun, moon, and stars; and paste the sets on large sheets of paper or fasten them to the window pane with transparent tape.

Such cut-outs may leave much to the imagination or they may be made more realistic with colored crayons used by the child himself; or the objects

may be cut from appropriately colored papers (in the package mentioned above) and mounted on white.

One might illustrate in paper Mother Goose, later the poems of childhood like "Wynken, Blynken and Nod", "When I Was Down Beside the Sea", etc. Nature stories may be illustrated *ad infinitum* and many other suggestions will occur during the story hour. The home-made illustrations will portray the stories more vividly for the moment than book illustrations and help the child to retain what has been read to him.

Trains and things pertaining to trains are always interesting to boys. For a two-year-old was cut at his suggestion a little paper train around which was bent a tunnel, leaving little tabs on the paper for fastening it down. When the four-year-old saw it, he offered additional suggestions, so that in the end were laid out on the window seat a tunnel, with two tiny paper tracks, one train going in and another coming out, a "tickler" just in front of the tunnel on each track, a semaphore with a movable arm on a bent pin, a bridge near by with a road leading over it on which an automobile was ascending. Transparent paper tape held the poles and trains in place.

This paper tape is useful in mending children's books and is more satisfactory for such purposes as the above than is library paste in the hands of a small child. Linen tape is useful for mending the backs of flexible books, dolls, and other toys, although

strips of white muslin and liquid glue answer fairly well at practically no cost.

A box of engine-turned colored papers can sometimes be purchased in stationery or toy stores, especially around Christmas time, and it serves for many kindergarten purposes.

Promiscuous use of the scissors is of little value educationally, and so many of the suggestions in this section need the mother's help for their execution, if accuracy and imagination are to be developed. Paper cutting is chiefly a medium through which may be reached a multitude of interests. Every suggestion offered by the child should be carried out and every offer to do part of the cutting most assiduously accepted; very shortly he will be doing it all, not improbably to the mother's great relief and satisfaction.

Sewing

Winding yarn is not especially instructive, but it amuses for a short time. A cardboard or long piece of paper folded many times, and a length of stout twine may be followed by a piece of cardboard with notches cut on opposite sides and a small ball of colored yarn or string, which may be wound straight across, later crisscross, and still later, with assistance, into various attractive patterns.[1]

One three-year-old is fond of winding a ball of coarse string by unwinding a larger ball at the same

[1] Nora Archibald Smith. "The Home-Made Kindergarten." Houghton Mifflin Company, Boston. (1912)

time, reversing the process as the balls become variable in size. He also likes to wind bobbins from a spool of thread and this is an inexpensive way of affording considerable pleasure, for it is done many times with the same thread.

If the child is especially interested in sewing, the simplest perforation work might be commenced in the home around the fourth year. A thin cardboard with a row of dots marked out by blue pencil, an inch apart, may be punctured with a dull knitting needle by the child. Later the mother might draw a simple pattern and indicate the places for perforating more heavily, a row of parallel lines, a square, rectangle, circle, a pail, a leaf, a bird, a house, etc., stopping when the child indicates his inability to execute the designs with ease.

Regulation sewing cards are not appropriate to this year; the work is too great a strain on the finer, the eye and finger muscles, even for short periods of time.

Home-made Toys

It is obvious that few toys can be made entirely by a child of less than five, but he can assist parent or an older child to make simple things, lay figures upon which to drape his fancies. I do not propose to suggest means of making wooden toys other than the simplest, for these belong rather to the realm of manual-training departments than to the home.[1]

[1] Numerous suggestions for making such toys may be found in "Toy-Making in School and Home", by R. K. and M. I. R. Polkinghorne

Pasteboard toys are easy to make and cost little if anything, but are empirical in nature; they serve their purpose, however, if they stimulate the child's imagination, help to make him dexterous, and amuse for a few days.

Candy boxes, tubular cereal, pickle, and ice-cream cartons, cigar boxes, tin salve boxes, large-sized thread spools, wooden darning-yarn spools, ribbon reels from dry-goods stores, paper cones used in serving ice cream, these are all useful for bodies and wheels of movable toys. Wire paper fasteners, brass fasteners with heads, linen stick-tape, wire, needle and thread, and liquid glue hold parts together, and, with these suggestions, any parent and child can devise numerous objects which can be used as carriers.

A lighthouse can be made from two similar oatmeal cartons, one superimposed upon the other and glued to it, with windows and a door cut. A revolving turret at the apex may consist of a large pill box or a small round pickle container with appropriate windows cut, revolving upon a large bent pin through adjacent ends of the upper two containers.

A Dutch windmill may be made from one oatmeal carton, with windows and doors cut out. The mill wheel may be the regulation network wheel cut from

(F. A. Stokes and Company, New York, 1920), and in "Children's Occupations", by Maud C. Nash (Vol. II of "Kindergarten Children's Hour", Houghton Mifflin Company, Boston, 1920). See also public library catalogue under the headings of "Toys" and "Toy-Making."

cardboard and attached with a bent pin or a brass paper fastener, with the little squares indicated or cut out; or it may consist of a pinwheel of celluloid or cut from paper. A very simple one may be cut as shown in Figure 9. The circular porch around the lower part of the mill may be cut from cardboard and supported with toothpicks.

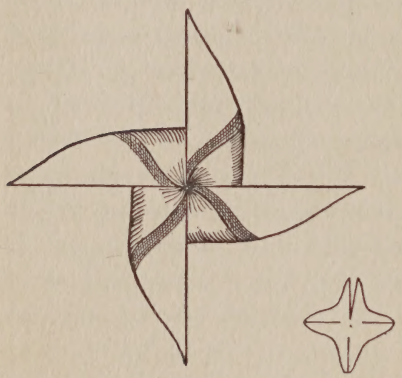

FIG. 9: A simple pinwheel for use on home-made windmill.

A locomotive is, perhaps, the most interesting cardboard object one can make for a little boy. The boiler is a round ice-cream carton, this being more slender than a cereal carton. The small wheels are made of thread spools and the driving wheels of ribbon reels, which have large disks with slender middle portions. These can be wired on the body and the wires twisted together on the inside of the carton. The cab may be made from a half-pound candy box set on end, with the two parts glued together and the box glued to the end of the round carton. A furnace feed should be cut in the carton and the box before gluing. Seats are glued in place and windows cut in the cab and the end facing the tender is cut away except at the top. The smokestack is a slender

spool wired to the inside; steam whistle and sand dome are difficult to devise, but if the child is not too particular, flat paper pill boxes may be cut at the base to fit the boiler, or the boiler cut away a little for their insertion and then glued on. The bell and its frame may be cut from cardboard and pasted on crosswise. For a headlight, the tiny automobile rear-light bulb, when discarded, is very realistic when fitted tightly into an opening in the end of the boiler. The pilot is a small square pasteboard box, a match box for instance, glued on one side to the boiler with the ends cut to triangles and the top dropped accordingly.

The tender is made from a small candy box furnished with spool wheels and attached to the engine by a string, for flexibility in turning curves. The whole outfit may be dipped in dilute India ink or blackened with water colors and inscribed with appropriate name and number.

For box cars, one may again use candy boxes, pasted shut, with spool wheels wired inside. The ends may be sawed-off thread spools and only the end disks used, fastened to the sides with nails or large paper fasteners. These cars may be transformed into coaches by cutting windows or drawing them on the outside of the boxes. Water colors in appropriate colors for various railroads add to the interest. Flatcars or gondolas which can carry small toys consist of the bases only or with the sides of the boxes cut down appropriately.

A small wooden cart may be made from a cigar box without the top and with large-sized spools or stiff cardboard disks attached with nails. The tongue may be a thin wooden strip from a box. Fruit-store "flats" often suggest themselves as toy subjects. Small corrugated boxes from electric shops make conveyances of various sorts when fitted with wheels, taxicabs, moving vans, delivery wagons, street cars, etc. The "motors" may consist of match boxes or small round cartons cut in two lengthwise and one-half glued to the front.

Corrugated boxes of various sizes make splendid doll houses when washed over with water colors and furnished with partitions, windows, and furniture. There is practically no end to the possibilities in a doll house. Suggestions for cardboard furniture may be found in various toy-making guides, from kindergarten supply houses, and in ten-cent stores, where metal and wooden furniture is also to be found in great variety, but rather ephemeral in nature.

An elaborate castle made from pasteboard cartons and boxes was illustrated in the *Ladies' Home Journal* for December, 1922. Simpler ones might be made from the suggestions it gives.

Body and Sense Training

Finger Exercises. Many, if not most, of the finger exercises are more adaptable to the child of from three to four than they are for younger children, and besides being appropriate to their physical develop-

ment, they are now thoroughly enjoyed for the mental stimulus they contain. A few of the Mother Goose exercises are still appropriate; for example, "Bean Porridge Hot", although the child of three and over is no longer greatly interested in Mother Goose.

Perhaps the best exercises for the growing child are those devised by Miss Poulsson [1] already mentioned in Chapter Three, one of which is given below:

The Little Plant

In my garden bed (Hands folded together, space within)
Raked so nicely over, (Rake with fingers)
First the tiny seeds I sow (Brush seed into a hole)
Then with soft earth cover. (Cover with hands and pat down)

Shining down, the great round sun (Hands together over head)
Smiles upon it often;
Little raindrops, pattering down (Patter)
Help the seeds to soften.

Then the little plant awakes!
Down the roots go creeping. (Fingers point downward)
Up it lifts its little head (Thumbs pop up)
Through the brown mold peeping.

High and higher still it grows (Hands slowly elevated)
Through the summer hours,
Till some happy day the buds
Open into flowers. (Hands open, palms up)

[1] Emilie Poulsson. "Finger Plays for Nursery and Kindergarten." Lothrop, Lee, and Shepard, Boston. (1893)

Other plays, with suggestive titles, include The Caterpillar, Making Butter, Hen and Chickens, The Squirrel, Miss Pussy's Dinner, etc., all of which now fall within the child's understanding.

Tactile Training. Some psychologists say there are five types of imagination, visual, auditory, tactile, olfactory, and gustatory, most frequently found in the order named. Some individuals must see words written, others must hear them spoken, and still others speak them before memory reacts. Whether or not these types are fixed by heredity or are determined by the environment has not yet been studied. Most people possess sight memory, but why, we do not know. Other psychologists stoutly deny that there is more than one type of mind (Thorndyke, *e.g.*) and that the child can be trained in any one of the five directions we wish.

Whichever view will prove to be the correct one, educators are not awaiting a decision before acting, but are endeavoring to train the senses, and, in early life, to train particularly the tactile sense instead of allowing it to become entirely superseded by the higher senses of sight and hearing. It is true that if one sense be lost, the others become keener, even in an adult, and if training can develop any one sense, obviously this training would be of correspondingly greater importance if begun in early childhood.

In order to the better preserve the tactile sense, its training must be begun in the early years, before retrogression has set in to any considerable extent.

The touch training with sandpaper strips, as begun the previous year, leads to the recognition of sandpaper letters when blindfolded, and young children very frequently recognize the letters by touch more readily than they do by sight. This training develops the same hand and finger muscles which are presently utilized in the early teaching of writing by the Montessori system.

A further development of the tactile sense is the recognition of various textiles while the child is blindfolded. A set of prepared textiles may be purchased [1] or is easily arranged at home from scraps of material. For earliest recognition, there should be materials with as much variation in texture as possible, but for the older or the trained child, smaller differences should be used. Two samples each of velvet, silk, wool, linen, cheesecloth for the younger child and various grades of cotton cloth for the older child are cut into small rectangles and hemmed by hand.

The child is at first allowed to handle the pieces and is taught their various names and asked to describe how each feels and differs from the others in order to procure a working vocabulary. Then, blindfolded, he is asked to name the various pieces and to describe them. Later he is asked to arrange one set in order of thickness, and still later is given two sets and asked to match pieces and arrange them

[1] The House of Childhood, 103 W. 14th St., New York. See also the Montessori books for further directions.

in proper order. Obviously this exercise is more difficult than matching sandpaper strips.

The various insets used in the previous chapter may be used when the child is blindfolded, matching the inset with its proper aperture.

The tactile sense is so well developed in a small child that, with a little training in interpretation, the results will often surpass those of an adult both in reaction time and acuteness.

Taste and Smell. The gustatory and olfactory senses, which are intimately associated, are relatively poorly developed in children and develop slowly as compared with those of sight and sound. That these senses are capable of a higher degree of sensitiveness by training is attested by the fact that there are professional tea tasters, and chemists who compound from coal-tar products synthetic perfumes rivalling the flowers for which they are named.

If the child is allowed access to the kitchen cupboards with their various food products, already he will have learned much concerning odors, if not of tastes; *e.g.*, that many things which are similar in appearance have no odor, — salt, soda, fruit sugar, — or very different odors, — vanilla and vinegar.

For a study of these senses, one might arrange little heaps of various substances, flour, sugar, salt, soda, cornstarch, and ask the child to name them by sight, and then, when blindfolded, by taste. Such things as pepper, vinegar, syrup, vanilla, lemon, nutmeg, cinnamon, sage, etc. can be used when he is blind-

folded and designated not only by sweet, sour, bitter, etc. but individually by names as well.

One should lose no opportunity of interesting the small child in the odors of various garden flowers and other æsthetic substances as a part of his cultural training.

Doctor Montessori gives an apparatus to train the *baric sense*, which may be considered a sixth special sense, consisting of wooden tablets of the same dimensions but of different weights, being made from different woods. This sense may be cultivated gradually, however, with no special apparatus, if the mother takes advantage of unanticipated opportunities as they arise. Two books, two blocks, several similar boxes closed and filled with sand and stones, etc. are suggestions for use in discriminating weight differences.

Sound Training. Three years is none too early to train the child in the recognition of musical selections and of the various musical instruments. Teach him by means of the phonograph, where dependence is upon sound only, to differentiate piano, violin, cornet, etc. and also to recognize soprano, tenor, contralto, and bass voices. Teach him the names of musical selections played, or, if the titles are difficult, the names of the composers; do not attempt to simplify titles or the pronunciation of names, which will only have to be "unlearned" later on. Do not imagine the small child appreciates only simple music; of three hundred player-piano rolls,

two little boys of less than five prefer Beethoven to any other composer, and the four long selections from the Ninth Symphony are their prime favorites.

Teach little children by walks in the park and forest to recognize bird notes without seeing the birds. Teach them to sit quiet five minutes in the house or out of doors and name all the various sounds they recognize. Blindfold a child and ask him to walk toward a trickle of water at a tap, a going clock, a ticking watch, the crumpling of paper in the hands of another person, tapping on the blackboard, etc., of course removing all obstacles in his path beforehand.

The Montessori apparatus for training the sense of sound consists of a group of twelve closed wooden boxes, six in a set, one in each set containing fine sand, coarser sand, fine gravel, coarse gravel, small pebbles, small stones. Using one set, the child shakes the boxes and places them in proper positions in a sequence of sounds. Then, with both sets, he places together the similar-sounding boxes and then arranges them in their proper sequence. Like many other Montessori exercises, this consists of two exercises in one.

These boxes may be purchased or a crude set may be made at home which answers the purpose for one or two children, but which, like other homemade apparatus, is not adapted to rough handling or use by a number of children. I purchased twelve little paper pill boxes of uniform size for a few cents and

half-filled them with flour, granulated sugar, fine sand, coarser sand, fine gravel, and coarser gravel, gluing each shut. One set was marked with red on the under side and the other with blue for ready identification and kept in a small pasteboard box ready for use at infrequent intervals, and utilized as described above.

Sight Training. Sight seems to be relatively better developed in most people than sound and therefore children are more interested as a rule in exercises involving that sense in which they are already the more proficient.

Tests of keenness of *sight perception* consist in such exercises as these: Ask the child to name all the objects in the room which he can see; all that he can see in a park or forest; all that he can see in a given place without moving his head; all the plants in bloom in mother's garden. Ask him to point out all the stars that he can see on a bright evening. Arrange various familiar articles on a table, bring the child into the room, and, allowing three minutes or less for inspection, remove or blindfold him and ask him to name all the objects he can remember having seen.

Place a few objects in a row and ask him to name them in order. Then remove one object when he has turned his back, space them equally again, and ask him to name the one missing. This may be continued until all but one object has been removed. In order to use this game as training, and not for

amusement only, one should commence by using three or four widely different objects, such as spoon, top, cup, ball, and gradually increase both the number and the similarity of the objects as the interest and ability of the child increase. Too difficult a task only discourages a sensitive child at the outset.

Show the child a book and then, when his back is turned or when he has been blindfolded, place it on a bookshelf and ask him to find it. With several children hunting for the same book, considerable interest can be aroused. Ask him to name all the objects he sees in a picture. Place several similar pictures before him, and when his eyes are closed, remove one, rearrange, and ask which is missing. Commence this test with three pictures, increasing the number up to six or eight. Two may be removed at a time after some proficiency has been reached.

A collection of Perry or similar pictures [1] is a very valuable adjunct to the home training of the child, not only for the information it contains, but for developing the keenness of perception as well. Sets may be selected adapted to all ages of children, even beginning with a child of less than two years. Groups might be selected to consist of the following: domestic animals with their young, human babies, colored pictures of the commoner birds, and Biblical

[1] Brown-Robertson Co., 415 Madison Ave., New York City; The Perry Picture Company, Malden, Mass.

groups chosen for the suitable story material and artistic conceptions.

Pictures representing action are more interesting and more instructive than those of repose. With a very few pictures, and the child in the proper mood, ask him to point out various objects he sees, making a little game of who-can-find-first. Then ask him what is happening in the picture, attempting to have the child relate the story in his own words rather than by the question-answer method. This can be done with a child of less than three but perhaps with rather indifferent results. During the third year, one should be able to see considerable development of the child's powers of perception and apperception. This picture exercise I consider very valuable training, especially with little children in their third and fourth years. It is developed elaborately in mental testing of school children and if valuable as a means of testing the intellectual ability, why may it not be still more valuable as a means of training the intellect as well?

There is a busy-work exercise published by Bradley [1] which is suitable for sight training in the three to four-year-old child, but which is designed for one just learning to read. It consists of twenty-five small cards with illustrations from paintings of dog, cat, boy, horse, etc. Below the illustration the name of the object appears twice. One of the

[1] The Thompson Self-Verifying Busy Work. Milton Bradley Company, Springfield, Mass.

names is cut out, the piece fitting only into its proper place and no other. Besides teaching the younger child to name common objects at sight, it teaches him to judge whether or not the little name cards will fit into spaces on the cards, even though he is unable to perceive that the names are alike or different. Trial-and-error method of fitting the cards will probably be used first, soon discarded for sight judgment alone. Without conscious effort, the child thus learns to spell many of the words and to recognize the "make-up" of long animal names. After one four-year-old had mastered the various combinations, which he did during one month's time, he was given only a dozen of the small portions from which he was soon able to name the words without spelling them out.

Numerous other combinations of words and pictures can be purchased from supply houses but most of them are adapted primarily to the schoolroom.

In the training of color perception, many exercises have been devised. Preyer [1] used small oval cardboard disks in the six principal colors, two of each, in training his son of two years, adding later on the intermediate colors and black and white. Still later, one might use many shades of the same color, as did Doctor Montessori in her set of Color Tablets.[2]

[1] W. Preyer. "Mental Development in the Child." D. Appleton and Company, New York. (1893)

[2] Maria Montessori. "Dr. Montessori's Own Handbook." Frederick A. Stokes Company, New York. (1914)

These tablets consist of sixty-four skeins of silk wound upon little flat spools, eight colors and eight shades in each color. A duplicate set is also made and the child asked to grade the shades in one set and to match shades in the two sets, being given perhaps only the tablets of one color at a time.

This exercise is valuable not only for the child of kindergarten years, but also for the older boy and girl, who, perchance, had not received this color training in the younger years; even the adult finds the test interesting. It is an exercise not soon discarded by the child, and so warrants being well constructed and well preserved.

The Montessori sets are contained in an attractive wooden box and are substantially made for use in a schoolroom. A home-made set of colors is less effective, perhaps, because it is practically impossible to purchase in stores the whole sixty-four properly graded colors made by the same manufacturer; colors with the same names but made in different mills vary considerably.

I purchased a sheet of rather thin white Bristol board and cut it into shapes patterned after the cardboard upon which darning cotton is sometimes wound. In the Art Department of a dry-goods store I found four shades each of the six chief colors. The shades are numbered on the labels so if four consecutive numbers are chosen, of the same brand, a perfect color sequence is obtained. Avoid a dull series of shades. One skein of each shade will wind

two tablets if the thread is wound flat and in only two layers. The ends may be pasted underneath or tucked under the edge of the card. Such a set can be made for around a dollar, and if kept in a container and handled carefully, will last almost indefinitely.

Colored crayons form an indispensable part of every little child's equipment as soon as he shows a desire for them, but I do not think the same applies to water colors. Nowadays when drawing is one of the requirements in the schoolroom curriculum throughout the early years, water colors can then be used; the possibilities preclude their too early familiarity and contempt.

Colored papers for cut-outs and paper chains, with a tube of photograph paste or a little transparent paper tape, satisfy the longing for color in masses and give much neater results in the hands of a small child than does pigment in a water medium.

Gymnastic Exercises

The small child who leads a normal, active life needs no gymnastic exercises for his physical development, and military drills are out of place at a time when all the movements are those of curves and not of straight lines. A few drills now and then, however, done in the spirit of fun and adventure, may help to make the four-year-old child mentally alert and teach him to obey commands.

Have the child stand with heels together and arms

down, and then breathe deeply three times. Then place arms straight out at sides, straight out in front, raised over head, down at sides. Give these directions slowly so that the child may comprehend where these parts are, and ask him to return to the original position each time. Then may be given hands on head, on back of neck, on shoulders, folded over the chest, on stomach, on hips, on knees, on toes (if he can). Raise the right arm on high, then the left, raise the left leg, the right leg, kneel on the right knee, on the left, stand on tiptoe. Turn head to right, to left, bend head forward, then backward, swing body around through 360° on the left heel, then on the right, etc.

Commands

In line with the above exercises is the giving of commands, first one, then several at a time, first direct, then with a delay of some minutes. The mother may be surprised at the delight a four-year-old may show in this "game", and he may ask to play Commands over and over again.

Start by giving one simple command at a time; *e.g.*, "Go into the kitchen and bring me a glass of water." After several simple commands, give two at a time: "Take a book from the library shelves and place it on the dining table." Such a command involves several trains of thought, and its proper execution requires considerable mental effort. If too difficult, give commands which require but little

movement from one position and with objects within sight. Three commands are not beyond a four-year-old if given slowly; give each command but once, or at least make but once the aim.

Deferred commands, for the most part, are beyond a four-year-old child; even to adults they often seem difficult. If gradually reached, however, they form a very valuable part of child training at some state of development. "In ten minutes go to the blackboard, draw a cross, and return to your seat"; "At five o'clock, be sure to feed the dog," are examples.

Most commands should bear some relation to the child's interests; if developed very gradually, and purely in the spirit of play, this exercise will go a long way in inculcating the habit of obedience. The quick perception of the command and the apperception of its meaning and accomplishment are not only valuable but necessary adjuncts to life in this rapid, mechanical age.

"Commands" are not new; little folks played at word-of-command in the schools established by Basedow (1723–1790) at Dessau, Germany.[1] The teacher gave a word in Latin and the pupils did what he said, shut their eyes, sewed like tailors, looked about them, crowed like cocks, mewed like cats, and so on. Another game consisted in this: Some one wrote in Latin the name on a paper and hid it and the rest

[1] F. V. N. Painter. "A History of Education." D. Appleton and Company, New York. (1886)

guessed what the word was; the one who guessed correctly was given an apple or piece of cake. Thus the game served two purposes: it helped the child to remember his Latin words, and helped simplify schoolroom obedience under the guise of play.

Game of Silence

One of the best of the Montessori suggestions, it seems to me, is the "Game of Silence", but it is hardly applicable to a small child who is not expected to sit still for long or to concentrate his mind on one thing for any definite period of time. During the formal kindergarten hour, however, it often works wonders. If the interest is lost and the head inclines to droop, five minutes of looking at a clock with mother or teacher is like starting lessons afresh. Five minutes is a long period to a little child, but during that time one may watch him gradually lose "that tired feeling", become blank, then become aware of a little noise from somewhere, soon localized, then perceived as a timepiece on his desk. Soon the motion of the hands catches the attention and holds it; he wonders what makes them go, and before he is aware, time is called. Thus sensation, perception, apperception follow each other in prescribed order, and the newly created interest can be shifted to the work in hand, taking it up at a little different angle from where it was left off. Obviously, this exercise applies to children beyond the kindergarten age as well.

Miscellaneous Interests

Collections. If the child has not already started a collection of some sort, the parent may suggest an interest, which, by this time, needs little further stimulus. Small colored stones and a pocket in his trousers very early in a boy's life form a natural combination.

These nuts, that I keep in the back of the nest,
Where all my lead soldiers are lying at rest,
Were gathered in autumn by nursie and me
In a wood with a well by the side of the sea.

This whistle we made (and how clearly it sounds!)
By the side of a field at the end of the grounds.
— R. L. Stevenson, "My Treasures."

The "collection" instinct commences to develop at around three years and until eight is very strong. It lasts, however, throughout life, and often stretches from stones to dollars. Large seeds, nuts, coins, and stamps do not deteriorate with time, but collections of birds' nests and eggs, butterflies and beetles, and, to a less extent plants, do. The museum beetle is universally distributed and it is practically impossible to eradicate from home collections, but even so, an evanescent collection of such natural objects cannot but lead to a greater familiarity and deeper interest in animals and plants and should not be denied the boy or girl. There is no harm in collecting last year's bird's nests, although, of course, eggs

come in another category; and most of the insects are better in collections than alive; there is little possibility of exterminating them, anyway. It is of course too early to begin the proper mounting of various insects unless this is done by an older person, directions for which may be found in many books on natural history;[1] but even the simplest collections should be kept in orderly fashion in boxes among the child's own possessions.

Chains. Strings of beads may be made from natural objects, both for busy work and for personal ornamentation, for little children, like savages (and some adults even to-day), delight in gay adornments. Necklaces or chains for Christmas-tree decoration and the like may be made from cranberries, popcorn, macaroni in short lengths separated by gay paper wheels, soaked peas, gay wooden beads, etc. All these are, of course, of little or no educational value, however.

Paper-folding. A child nearing four is not too young to make valentines, a flag for Washington's Birthday from paper strips, simple picture frames from twisted and plaited colored strips, etc., with a little help.

The simplest paper-folding may be taught him at home, but this is difficult even for the kindergarten child, without considerable assistance. Directions

[1] There is a bulletin, "Our Common Butterflies", published by the American Museum of Natural History, New York, Guide Leaflet series 38, which gives adequate directions for mounting and preserving insects.

for making various objects may be found in the following books:

Edw. Wiebe. "Paradise of Childhood." Milton Bradley Company, Springfield, Mass. (1910)
Maria Kraus-Boelte and John Kraus. "The Kindergarten Guide." Steiger, New York. Vols. I and II. (1882, 1892)
W. N. Hailmann. "Kindergarten Culture in the Family and Kindergarten." Wilson, Hinkle and Company, Cincinnati. (1873)
Maude C. Nash. "Children's Occupations." Vol. II of "The Kindergarten Children's Hour." Houghton Mifflin Company, Boston. (1920)
Beckwith, M. H. "Story-telling with the Scissors." Milton Bradley Company. (1907)
E. A. Weaver. "Paper and Scissors in the Schoolroom." Milton Bradley Company. (1893)
E. Heerwart. "Course in Paper-folding: One of Froebel's Occupations." Charles and Dible, London. (1895)
A. E. Maltby. "Paper-folding." The Butler Eagle, Butler, Pa. (1894)

Paper-folding was a familiar amusement for children long before the kindergarten was known, but the folding was done by the mother or nurse and the completed object given the child as a plaything; it was but a step down to transfer the occupation to the kindergarten itself. The occupation both requires and teaches accuracy, and is useful not only for the early years but for most of the years of childhood as well.

Only the very simplest folding should be taken up

with the child under five and this only if he is interested. Make a book from a four-inch square of paper by folding the lower half upon the upper. On the resulting four pages may be drawn colored pictures or letters and figures. The folded sheet makes a roof with sloping sides to be placed over a blockhouse; it forms a soldier's tent or a tunnel for a train of blocks, and from several similarly folded sheets a long tunnel can be made for whole trains.

Another fold, parallel to the first and thus halving each side, makes a flat-topped tunnel or a bridge. It is also a table or a tablecloth or a long bench. By depressing the middle crease, a double roof is made much like that of modern one-story factories. Inverted, it makes a double trough for feeding farm animals.

The three longitudinal folds divide the paper into four long rectangles. If the same folds are repeated at right angles to the first, it is now creased into sixteen small squares. These squares may be counted, either one row or in a group, or with the whole as a unit.

With a new square, one diagonal may be folded and the triangle, a new form, introduced. Around the triangle may be built many imaginary conceptions; it may be the shawl around a clothespin doll, a pyramid, a snowplow which will stand alone, a mountain; and several triangles may be a mountain chain with valleys between. With both diagonals folded, another snowplow results, or the pilot

of a locomotive, or a tent open at the back. Flattened out again, one corner of the square may be brought to the center and then the other three folds also, forming an envelope which can be made to contain colored drawings, and the edges pasted shut with a star or heart seal cut out from colored paper.

My son of less than five likes to "write letters" to his relatives and friends, and even very frequently to his parents, and seal them in envelopes with stamps, ready for mailing, with rather disastrous results to the stock of envelopes and postage stamps. I taught him to cut, fold, and paste envelopes of his own, using a regulation sized envelope for pattern. Now he keeps a box of his own self-made envelopes, ranging in size from a postage stamp to eight inches in length, according to the size of the letters he wishes to envelop. He designs his own stamps and colors them suitably, also.

Literature

What we shall read to young children is a very important subject and one not easily disposed of. Just as with occupations, we should slightly anticipate the child's needs and not keep him on one diet after he has shown a taste for something more advanced; a child of between three and one half and five can absorb a surprisingly large amount of literary food.

The book world contains so much that is fine that we should be satisfied with nothing short of the best. A label "For Children" is not sufficient warrant of

worth as a gift for little nephews and nieces, for the selection of the proper gift book for a child is not by any means a simple one. A book as a gift is unlike a toy, which can be discarded at will; the book may be discarded too, but its contents still remain and may direct the child's thoughts along unsuspected channels, good or bad. One horrible picture or one false situation may spoil the book and leave a lasting impression on the developing mind.

Mothers should frequently consult and study the library lists of the best books for children, selected according to age. Books consisting of graded lists, with comments, are as follows:

Graded List of Books for Children. American Library Association, New York. (1922)

Clara W. Hunt. "What Shall We Read to the Children." Houghton Mifflin Company, Boston. (1915)

W. T. Field. "Fingerposts to Children's Reading." A. C. McClurg and Company, Chicago. (1907)

Annie P. Moore. "Roads to Childhood." George H. Doran Company, New York. (1920)

Annie P. Moore. "New Roads to Childhood." George H. Doran Company, New York. (1923)

Booklets published by prominent bookstores each fall give suggestions from which to select children's books, containing price lists and descriptions of various older editions as well as the latest published books, which will vary greatly in value. Many city libraries publish lists for free distribution or will make individual lists upon request.

When fairy stories are begun, a wonderful new world is opened up, the doors of which must be swung back gradually and with the greatest care, lest we irreparably injure the budding character. The first fairy stories should be sunny ones that end happily and do not contain too much plot; the wolf should not be made to eat the grandmother in the earliest renditions, but only to put on her cap and climb into bed; he should not fall into the pot of boiling water and be killed but only hurt; Jack of beanstalk fame does not need to kill the giant for several years. Death of the good or bad has no place in early fairy stories; in fact, I think it should not be mentioned in the presence of children under five, who come gradually to realize that there is an end to all things.

After he has entered the fairy world, the child's attitude toward his Mother Goose is often interesting to note. When I attempted to go back to his first book after it had had a few months' rest, my small son slipped down from my lap with Mother Goose in his hands and placed it in a bookcase with his father's books; so far as he was concerned, he was through with it.

The books of fairy stories are so many and the editions often so elaborate that the parent may encounter no little difficulty in choosing a suitable volume for the proper introduction of his child. All probably have their faults as well as their virtues; a seemingly splendid edition may be unwieldy and weakly bound, a beautifully illus-

trated one may contain an unwise selection of stories, and one with suitable stories may be illustrated with two-headed giants, horrible dragons, etc. Whatever volume is chosen will probably need new renditions of some of the stories until the child is old enough to read them for himself, and possibly some of the illustrations destroyed or pasted over to suit the individual child. "Seein' Things at Night" may appear to an adult as a splendid art creation, but it may make a child see things for many years. Incidentally, if ogres and giants and spooks are never allowed to enter the child's sphere, either in pictures or by word of mouth, he will have absolutely no fear of the dark.

"There is no question that some fairy stories are entirely undesirable and inappropriate. Those containing a fierce or horrible element must be promptly ruled out. Tales of cruel stepmothers, ferocious giants and ogres fill the so-called fairy literature." [1]

"The hero is always the child, so if he obtains success through subterfuge, by magic, good luck, or cunning, the child obtains a wrong impression which is not readily blotted out. . . . Let us at least give him heroes worthy of his imitation." [2]

"Epamandonis and His Uncle", "The Rabbit and the Elephant", "Jack-the-Giant-Killer", represent

[1] Kate Douglas Wiggin. "Children's Rights." Houghton Mifflin Company, Boston. (1892)

[2] Margaret Drummond. "Five Years Old or Thereabouts." Longmans, Green and Company, London. (1920)

the impossible, the false, and the horrible, which certainly do not assist in the ethical training of the child.

We need fairy stories, and we need plenty of them; during the highly imaginative years from three to five or six they should form the chief literary diet. A good imagination, made better by early training, is the stock in trade of our artists, scientists, inventors, and most successful business men.

"Some people object to allegories and fairy stories for children," says Mrs. Horace Mann, "but I am never afraid of this if they are true to nature, truly imaginative, and if the impossible is occasionally caught a glimpse of. A fairy that comes out of a flower is an imaginary thing that will never disturb the dreams nor deceive the intellect of a child. I always call such stories poetry and sometimes ask what they teach. . . . A child of well-cultivated imagination will be likely to be more rather than less truthful than otherwise. But I do not like ogres. . . ."

Neither Anderson nor Grimm is suited to a child of under five, but rather editions comprising rewritten and simplified selections from these and many other sources, adequately illustrated in the primary colors. The child already knows enough about birds and beasts to be interested in nature stories, Æsop in one of the many editions being one of the first books. Kipling's "Just-So Stories" (Doubleday, Page and Company) is always included in children's lists; "Bun, a Wild Rabbit", by J. W. Lippincott (The

Penn Publishing Company, 1922); "Little Black Sambo", by Helen Bannermann (Frederick A. Stokes Company); and "The Bojabi Tree", by Edith Rickert (Doubleday, Page and Company, 1923), very similar to the last, are among animal stories for little folks. "Orchard and Meadow", by Zoe Meyer (Little, Brown, and Company, 1923), is one of the best nature books I have seen; the stories can be read direct and need little or no explanation.

"Adventures of a Brownie", by Miss Mulock, is an altogether lovable classic which no children should miss. The Brownie is a very real individual who lives with the children, entering their joys and sorrows, for many weeks after they first meet him. "The King of the Golden River" and "Water Babies" also belong to this highly imaginative period, although they are to be related rather than read directly, aided by a few good illustrations. Well-illustrated, abridged editions, particularly English ones, may often be found in bookstores, which serve to introduce the child to the early classics, but these should be followed later by the complete works.

The early school readers often contain classic poems and short stories which are greatly enjoyed by children of younger years than those for whom they were intended.

A good book of children's poems should be in every home library and frequently consulted. There are many anthologies, ranging from the small

"Graded Poetry, First and Second Years", by Blake and Alexander (Merrill, 1905), and "A Treasury of Verse", by M. G. Edgar (Thomas Y. Crowell and Company), both splendid, to the voluminous and most complete "Home Book of Verse for Young Folks", by B. E. Stevenson (Henry Holt and Company, 1923). "The Singing World", by Louis Untermeyer, includes besides older poems many recent ones (Harcourt, Brace and Company, 1923).

CHAPTER VI

THE FIFTH YEAR

THE four-year-old is eager for something to do; he craves individual activity. If there were plenty of interesting occupations, mothers would not be confronted with the question, "What can I do now?" and we should not see little blank faces pasted against the windowpane as we pass along the street. The busy child is always a happy child, for now if ever is the time of activity and not of reflectivity, and every child has the right to a happy childhood.

During the long winter days when the out-of-doors activities are inhibited, every mother should provide not only amusement but also intellectual training for her children, even if nothing along this line has heretofore been done. Paper and scissors, pencil and paper, blocks and a table, are not enough; they need in addition direction, that the play may stimulate the imagination and be development and not mere "busy work."

"Children from the age of three to six are too young for the systematic discipline of the routine

school life. The function of education at this period must be whether in the home or the kindergarten to foster and gradually unfold, through wise stimulation, those instinctive activities and interests which make for the complete development of the individual at this stage, with the maximum of freedom and the minimum of necessary disciplinary control, consonant with obedience. The kindergarten must permit the children to become healthy animals first of all." [1]

How much better occupied as mothers we should be during this important year in working with our children than in making fancy cookies for them to eat and hand-embroidered clothing for them to wear!

Like the year previous to it, the fourth year is a very important one in mental development. In most of the higher mental processes, some proficiency has already been acquired, however, and it remains only to strengthen the cables already laid down.

A list of present interests would read something like this:

Imitating others, not as strongly as during the previous years
Highly imaginative stories
Intense curiosity about the world he lives in
Numbers, counting, writing, adding
The rudiments of constructiveness
Collecting natural objects
Physical and astral phenomena (Physics and Astronomy)

[1] Frederick Eby. "The Reconstruction of the Kindergarten." Pedagogical Seminar, VII, pp. 229–286. (1900)

Instrumental music, player-piano, phonograph
Solo singing
Drawing and writing
Out-of-door apparatus, slide, swing, sand, vehicles

He has but little interest as yet in

Group play, still being a little individual cosmos
Inventiveness
Toys ready-made and mechanical
Soft toys
Games other than individual ones
Ball playing
Running, jumping, gymnastics
Dramatics

Training the organs of special sense may follow suggestions already given in previous chapters and along individual lines developed therefrom. Home kindergarten work should now commence in earnest, and if the child has had an introduction to such during the previous year, one may be surprised to see how readily he grasps suggestions and situations which previously were rather difficult. Before he was four, my son performed kindergarten occupations with blocks, tablets, paper, and paste, with some assistance, but after having had a six months' recess, he would sit down by himself with "The Paradise of Childhood" and a set of blocks (Gift 4, 5, 5*b*, or 6) and copy whole pages of designs from the book, generously interspersing them with "improved designs" of his own.

It is during this year, I believe, that what we might

term formal education should be begun. Educators in the past would have been horrified at the idea of commencing the teaching of reading, writing, and arithmetic before the child had entered the first grade, at about six years, such things being rigorously excluded from the kindergarten course until nearly the end of the year. Now, however, we are beginning to teach these fundamentals earlier, not because we are desirous of making prodigies of our children, but because the budding intelligence indicates that it is ready to be taught. One who has no contact with children of the pre-school age might be surprised to see mothers teaching children of less than three to count, children of three to spell words with the small letters, and children of four to write script, and in the same year to add and multiply small denominations, but the wise parent would only be following the lead given by the child himself. We frequently hear the expression "Johnnie knew all his letters before he was two but by the time he was three he had forgotten most of them," a great opportunity lost because the parent did not realize that "a little child shall lead them."

"The formal education of the child should be begun before he has reached school age. The postponement of formal education to 'school age' is a serious pedagogical error and . . . actual study, properly directed, would by no means be such a burden on the mind of the child as most people take for granted. If the formal education of children

were begun earlier than is the rule at present . . . our boys and girls would develop . . . into men and women of mental attainments fairly comparable with those today . . . acclaimed as men and women of genius." [1]

But of equal importance with mental development in little children is that of laying the foundation of a lifetime of good health, inasmuch as lies within the power of the parents; for "a sound mind in a sound body is a short but full description of a happy state in this world. He that hath these two hath little more to wish for; and, he that wants either of them, will be but little the better for anything else." [2]

Possibilities of acquiring children's diseases are to be avoided by keeping the child from crowds, and, especially, large groups of children, during the pre-school years. "Oh, he will get them anyway" is poor logic, and even if he does fall victim later on, his system will then the better be able to combat their ravages. A five-year-old does not crave the companionship of other children than those of his immediate family, as an older child does; he is not yet a gregarious animal, and it is bad policy to thrust him into their presence. One or two outside playmates at infrequent intervals meet his desires completely. Sound health is the best predisposing factor to immunity from communicable diseases in both

[1] H. A. Bruce. "Psychology and Parenthood." Dodd, Mead and Company, New York. (1915)

[2] John Locke. "Thoughts Concerning Education." (1693)

grown-ups and children, and exercise and fresh air, combined with plenty of good but plain food, and sound sleep in abundance, pave the road of good health.

In order to keep the child out of doors and *in his own back yard*, he must have something to do. Practically no city back yard is too small to afford considerable pleasure to its owners. A suggestion has recently been made that the space behind rows of apartments and rented houses be turned into one block-long area and provided with apparatus and play space for the children of the block. Playgrounds are frequently too far away and there are dangerous streets to cross in reaching them, and these drawbacks are eliminated by playgrounds at home.

The City Back Yard and the Child

We are just beginning to realize in America that houses should be set close to the street and sheltered from it by high shrubs, tall evergreens, and lattices and vines. Heretofore, all city planning has called for one block-long unfenced sweep of lawn in front of homes, making a semi-public park practically useless to the owners themselves. But "The Century of the Child" is beginning to become a reality and not a mere phantasy, and in time we may see homes in the best districts set near the sidewalks, and back yards planned as carefully as heretofore have been only the fronts.

City back yards of private homes do not, as a rule,

permit of much of a garden spot. By the time garage, driveway, and drying space are allotted, what is left is frequently too much shaded by buildings to be valuable for even the scrawniest vegetables. But no space which receives any sunlight at all is too small for a bit of lawn, and the pleasure that can be derived from a lawn compensates abundantly for the effort it may have cost to make. It seems to me there is no excuse for the muddy back yards we so often see.

This little lawn should not be cut up any more than is necessary, for it is liable to be only too small at the best. One frequently sees back yards half concrete, with a side drive, and a garage at the back of the lot. I should place the garage adjacent to the rear or side of the house where there is a side drive, leaving every possible square foot of space in the back free for children. Little city children scarcely know how to run; they have no room in which to stretch their legs.

In one tiny city lot, thirty feet by ninety, laid out with thought for the children, each member of the family has his tastes gratified to a certain extent, at least — father with his single-car garage, mother with her vine-embowered high lattice fence and narrow perennial and rose borders, and the children with sand pile under the porch, swing, slide, and flying rings. A young soft maple, already in three years affords considerable shade for the hot summer days. Under it the children often eat their noon-

time meal on a small table, and its boughs suggest climbing, even to the small youngster. Drying lines extend across the whole yard, thirty feet, the posts being hidden by lattice and vines. The garbage pail, a necessary evil, is painted white to match the fence and sits upon a shelf on a divided gate, easy of access from outside but with the gate never left open for the small children to escape. The two gates are arched overhead and covered with vines and roses.

This tiny out-of-doors sitting room, and smaller lots scarcely exist, affords a degree of privacy which we as a country need to cultivate. We do not construct high brick walls as is done in France, but we can construct high, latticed, vine-covered boundary fences, beautiful, and yet gently announcing to our neighbors that we desire to be left alone.

If gates can be arranged and kept fastened, the little child can be trusted alone in the yard for hours. One need not fear automobile accidents if the toddler is kept off the front curb and is busily occupied in his own back yard. From four years on, however, gates are of no avail, and interest and habit rather than force must then be employed to keep the child at home.

Back-yard Apparatus

The baby should spend most of his waking hours out of doors in summer. I should not put a baby to sleep on the front porch if a back yard were available, for dust and noise do not portend a healthy child. A blanket or robe on the lawn, surrounded possibly

with a baby fence affords the creeping child much pleasure.

A lawn swing of adult size is perhaps the most useful single piece of lawn apparatus, useful to both grown-ups and children. A child of less than three will enjoy himself for an hour by standing up and swinging or by sitting on the floor and pushing the front of the seat to make himself go. He can travel to far-distant cities on his train and be his own engineer, passenger, and switch tender, all combined. When they were swinging high, I overheard this remark from the three-year-old to his brother of five, "Let's go up to God's heaven and bring down some of that blue."

For young children, I think the next most desirable apparatus is a low wooden slide. A hard maple slide, fourteen feet long and five feet high, may be purchased for around fifteen dollars. It should be taken indoors in winter, and may well be set up in the basement with the low end reaching into the sand-pile, thus affording pleasure the whole year 'round.

A low seesaw, consisting of a large semicircular hoop of steel about a foot wide and with a board fastened as its diameter, may be purchased for from seven to nine dollars. It is light in weight and may be placed on the porch or in the basement in winter. There are several other sorts of seesaws on the market, none, however, so simple in construction.

Two long two-by-four boards laid parallel on the ground will furnish pleasure to the little folks for a

time. Then, with one board removed, the child may learn to balance himself; this is like walking a railroad track. First the two and later the single board may be raised off the ground with one brick under each end, and later with two, then three bricks.

A stepladder in the back yard affords an excellent opportunity to acquire balance and confidence, and it gives the child a new view of his little world. A three-year-old may become proficient at manipulations on it, and falls on the soft grass are apt not to be of serious nature.

A narrow concrete walk, perhaps to the garage, affords opportunity for the tricycle or kiddie car, without the necessity of using the walk in front of the house.

There is a Government bulletin in which are described in detail directions and costs for making sand box, horizontal bars, flying rings, horizontal ladder, baby swing, and a combination apparatus consisting of swing, hurdles, rings, and trapeze, and a "Suggested Layout for Backyard Playground" [1] on a forty-by-one-hundred-twenty-foot lot.

Here are three more or less typical city back yards: One family consists of three boys under twelve who are forced to play in the streets and alleys. Their back yard is one fourth berry bushes, one fourth strawberry plants, and the rest divided between ash

[1] "Backyard Playgrounds." Folder No. 2, Children's Bureau, Department of Labor, Washington. (1922)

heap, old rusty tin cans, and vegetable spots. The boys have no wheeled vehicles, no gymnastic apparatus, not even a sand pile, and yet the parents are intelligent, prosperous Americans. Next to them live two boys of less than eight whose back yard is filled with a large garage and cement driveways, with no room left for apparatus. Down the street live five small children from one to eight years old who likewise play in the streets from morning to night. Their father raises dogs and the back yard is fenced in, in order to keep the dogs in and the children out.

Mother's Flower Garden

Mother's flower garden opens up a new and fascinating world and an ever-changing kaleidoscope. The tiny toddler's chief delight may seem to be to pick and bring in to his mother her finest flowers. Admonitions may succeed for a time only to have him one day bring in proudly and empty into her lap as specimens of his handiwork half a dozen of her choicest roses, all stemless.

But the garden should exist primarily for the child, and the parent's exasperation must be quickly absorbed into the new unfolding love for the beautiful. And this interest, once created, is not soon lost.

When father is sowing grass seed, he may start in his young son a passion for sowing seed which will last all summer long and he will sow sand with just

as much interest as seed, and will watch with just as much eagerness for it to sprout as his father does for the grass.

When mother is planting seeds, the small child should have his rake and hoe and spade and his own tiny plot to cultivate as frequently as he pleases, planting one day and digging up the next. Unfortunately, he always wants to plant and dig just where mother is; there is no interest for him in working alone. Mother must be something of the child and help him plant in his own plot leaves and flowers by their stems and quantities of little twigs; and so his garden is best left to lie fallow all summer for just such purposes.

A place to dig is dear to the heart of every child, be he two or eighty. Rather than risk disastrous results all over the small lawn, children should be given certain places in which they are free to dig at all times, preferably adjacent to the sand pile, and they should be provided with suitable implements for this purpose, old trowels, hand garden forks, old case-knives, along with the sand implements, wooden spoons, pails, aluminum molds, tin containers, sifters, sieves, etc. I found a small but sturdy snow shovel in the shops which makes a very satisfactory sand tool.

I believe in teaching the smallest child the correct names for plants, no matter how long; Latin names, however, should be used only in so far as they coincide with English names. When three years old,

my son could go around the garden and name correctly three fourths of the varieties of plants in bloom at any one time, from crocus in spring to chrysanthemum in fall.

The numerous insects which visit the garden interested him no less than the blooming plants themselves. The spiders he did not fear, for he watched them at work and was never told anything unpleasant about them; a maid did say that crickets would bite, and it took diligent, prolonged argument on mother's part to convince him to the contrary. He was told that some of the insects are harmful and some useful to the plants, just as the germs which sometimes permeate our bodies. He was not old enough at three to visualize the caterpillars which ate leaves as the lovely butterflies of the next season, for as yet he abhorred the one and admired the other. Each time he watched a bumblebee in an Anchusa flower he was told or saw something new concerning it or the flower. Humming birds often visited the garden to drink nectar from honeysuckle and Aquilegia, and just before going to bed he sometimes saw the big Cecropia and Luna moths which look so much like the tiny birds visiting the same flowers.

The beautiful colorings of the roses and hollyhocks and Delphiniums did not mean much to him except that they were red or pink or yellow or blue, but he loved their bright colors just the same.

In the fall, he helped to move little plants, to dig holes for the bulbs, to harvest the gladioli corms and

dahlia tubers and to pack them away in sand for the next spring.

And thus the garden year means much to a small child. No garden plot is too small to afford much of interest and instruction to a city child who is deprived of so much in nature. The country-bred child does not need cultivated flowers in his back yard — the woods and streams and the meadows are all his for the taking.

Leg-power Vehicles

In cities, where children are denied the freedom they have in small towns and country, leg-powered cars are far more important agents in physical development than many parents imagine. No apartment is too small to afford the little child much pleasure and profit from a small wooden car. It possibly affords the chief developmental factor of the lower limbs. The baby who has just learned to walk may be introduced to his first car and by the time he is eighteen months old he will be fairly proficient in propelling himself. I am strongly in favor of the tiny cars for home use and as soon as the first one is outgrown, he should have another.

In a scientific table of Gifts for Children at their proper ages, the Kiddie Car appears for the first time at from four to six years. My son at four had his fourth car, first the smallest foot-propelled one, next a rubber-tired pedal car, then two tricycles. His brother at two and one half already had number

three of these cars. In summer, they derived so much pleasure from feeling speed under their little bodies that there was no desire to venture off sidewalks into the street. The older boy was allowed to circle the block several times in succession, crossing no streets in so doing. Rubber-tired vehicles do not tend to make enemies of one's neighbors, as wagons do, and they are far more beneficial to the child. Cars and tricycles develop equally the muscles of both legs, and the feet are in their normal positions. A wagon, on the other hand, is propelled by one leg, the down-foot at any angle with the pavement but the normal one, as attested by the places in which the one shoe wears out fastest.

Little folks should not be allowed on the sidewalk a moment, however, without adult supervision, and it is much wiser to confine their excursions to formal ones with mother and to a cement walk in their own back yard.

But pleasure-giving as they are in summer, it is in winter that these vehicles are most useful. When out-of-door exercise is limited by inclement weather and snowy sidewalks, the chief amusement may consist in circling two or three rooms over and over again, even eating the lunch in peripedic fashion.

Mechanical Toys

"The plaything which makes no demand on the imagination, the skill, or the ingenuity of the player is the lowest in the scale of desirability, and for this

reason the mechanical toy is the most suitable for dull children and adults.

"'I want a toy to play with, not one that plays with me,' said the boy, playing with a mechanical toy twenty minutes; then he played the rest of the afternoon with the paper and string in which it was wrapped. . . . It is only the dull child, like the dull adult, who needs an elaborate toy to amuse him, for he himself cannot supply the details which are lacking." [1]

"It is a common error to give the child playthings which positively hinder both the development of his mental capacity and the growth of his knowledge of things, because they are too complete and perfect in their likeness to the things they represent. This is the adder hidden in the roses. The child can do nothing with such toys, for he cannot get enough variety out of them. They nearly kill in him that power of creative imagination by which he gives material and visible form to the ideas he conceives in his mind. Moreover, by their too great perfection of representative form, they make no demand on the child to seek and find the particular in the general . . . *e.g.*, to see some household object or some familiar animal in a cube or a combination of cubes." [2]

These quotations need no comment, and although

[1] Mrs. F. N. Jackson. "Toys of Other Days." Charles Scribner's Sons, New York. (1908)

[2] S. S. F. Fletcher and J. Welton. "Froebel's Chief Writings on Education." Frederick Arnold and Company, London. (1912)

educators agree that mechanical toys are not good for the child, yet their antiquity indicates their ever-present popularity. Toy bread-kneaders and water-carriers as playthings, and not as tomb furniture, have been found in Egypt, dating from 2000 B.C.

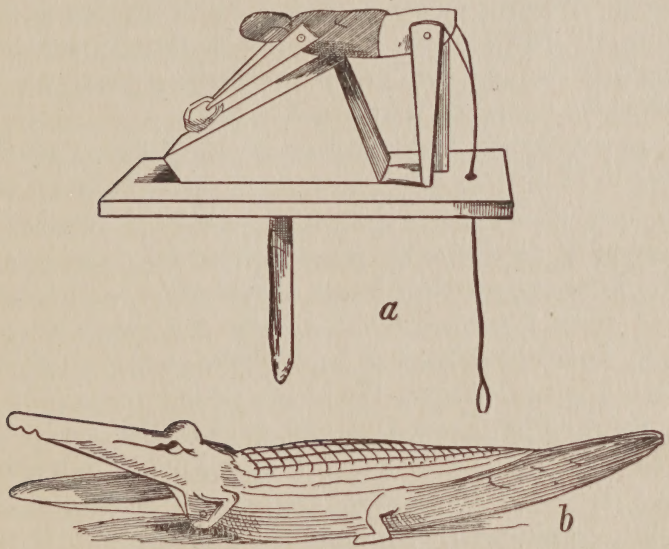

FIG. 10: Wooden mechanical toys from Egypt. After Wilkinson. (*a*) Bread-kneader manipulated by string. (*b*) Crocodile with movable jaws.

One little wooden kneader (Figure 10*a*) is mounted on a horizontal board with a vertical handle underneath to be grasped by one hand while the other pulls the string down, bending the figure and "kneading the dough." Another wooden toy found also in Egypt, a lion or tiger, eight inches long, possesses movable jaws which are manipulated by a slender

rope knotted under the jaws and passing over the head and back of the animal, and then through the baseboard. A crocodile with movable jaws probably operated in a similar manner is shown in Figure 10 *b*.

In Athens, almost every house had its movable toys. Wooden doves, operated by filling the body with air which gradually escaped as they flew, were devised by the philosopher Archytas (400 B.C.), who also made the first Greek rattle.

In the Middle Ages, mechanical contrivances which were moved by invisible means were looked upon with extreme disfavor and their makers were in danger of summary decapitation when discovered; but with the Renaissance, they began to find favor with kings and their households. One such toy consisted of little lancers mounted on horses, who carried on their fistic encounters upon the king's table.

By the Eighteenth Century much of the suspicion had died away and the brilliant French engineer and inventor Vaucanson (1709–1782) constructed many ingenious automata. Nuremberg early became an important center of the toy industry, exclusive of dolls, which supremacy it has held to the present time. Thence, the making of wooden toys spread to every town and village in southern Germany and Switzerland.

These early toys were expensive, and only to be afforded by kings and the nobility, and, indeed, were not purchased for the amusement of children, but for adults in an age before books were widely

printed or capable of being read. Like toys of all ages, they were only handed down to the children when discarded by their elders. Angels flapped their wings; quacking ducks paddled in the water, procuring and actually swallowing food; musicians played their tiny instruments; birds sang; acrobats performed; and dolls danced, all by means of hidden springs, the counterbalance, a stream of mercury passing through a tiny aperture, etc.

Louis XV possessed a most elaborate spring automaton wound by a key, for his amusement as king. It consisted of a coach with footmen, a coachman, and driven by eight tiny white horses which pranced about on a table before the king. When the beautifully enamelled carriage drew up before him, an elaborately gowned little lady stepped out, curtseyed, returned to her carriage, and was driven away.

Not all elaborate mechanical toys are antiques. While in a toyshop recently I saw numerous mechanical playthings priced from thirty to one hundred dollars, — a dancing doll gowned in chiffon and rosebuds standing on one toe upon a velvet-covered box which contained a large coiled spring wound up with a key; tumbling clowns; a little girl operating a scooter; a nursegirl rocking her tiny charge in its cradle; a boy who puts a whistle to his mouth, blows, then nods his head and taps his foot; a tiger "that crouches, wags his head as a warning and springs"; an alligator which "sneaks along opening its mouth and switching its tail", etc. But how long

would a child be amused with such playthings? His first reaction would be one of astonishment, or possibly of terror, and his next, if he recovers from his fright and goes back to it, of curiosity as to what makes it go, and for the latter purpose a discarded alarm clock would answer just as well. The adult's interest may lie in the mere repetition of the movement, but the child's is on a higher intellectual plane of discovery, and when all the possibilities have been demonstrated, his interest ceases. A little girl could never love a mechanical doll who perforce must stand forever on her little platform and dance, however attractive she may be to the eye.

It is unnecessary to ask which gives the keener, more lasting interest, a brightly painted mechanical toy which winds up and walks across the floor a few times until something goes wrong with its machinery or a set of prosaic but indestructible mosaic cubes, with their almost infinite pattern possibilities.

Pets

The term pets implies, first of all, dogs and cats; but dogs and cats serve no useful purpose whatever in city life. Electric burglar alarms and mousetraps are much more efficient and far less troublesome, particularly to the neighbors. The sentiment for pets is a worthy one, but its application generally is not.

Although the science of comparative medicine lies in the future, it is supposed that dogs and cats harbor

and transmit some of the same bacterial diseases which affect human beings, notably tuberculosis. It is a known fact, however, that they swarm with parasites and that they transmit to children various types of worms, one stage in the existence of which must take place in the dog or cat and the next stage in the human alimentary tract.

We used to think children acquired "worms" through faulty diet, but now we know that, harmful as the diet often is, it is not to blame for the parasites. They occur from unclean hands because children handle too much their household pets. And so I should not permit dog or cat in the house with children so long as they are liable to put their hands to the mouth, which period lasts until around five years old. Most of the worms in children occur before the fifth year. If the little child strokes a cat, he should wash his hands immediately afterwards, but since such a demand is absurd, we must banish the cat; similarly the dog. A dog for an older boy is a luxury better reserved for the farm than the city.

The dog has been reported as carrying no less than seven serious protozoön diseases to man and the list to animals is still longer; twelve species of tapeworms, liver flukes, and nematode worms occur in both dogs and man; ten species of mites, fleas, and flies inhabiting dogs are transmitted in the larval state to man. The following quotation speaks for itself:

"For over half a century parasitologists have been insisting that the dog is so largely responsible for the spread and so essential to the existence of so many important parasites that we must curtail his liberty and guard him, ourselves, our families, and our stock from the evil results of his unrestrained wanderings.

"Undue sentiment for the dog should not be allowed to blind us to his dangerous possibilities as a carrier of diseases and parasites or to stand in the way of effective measures for the protection of human life and health." [1]

In many older books is found the statement that every small child needs pets, cats, dogs, etc. to teach him humanitarianism. But if they harbor harmful parasites, what can be substituted for these time-honored animals?

I feel that what contact with brothers and sisters does not teach can be learned from the birds that come to one's door, by frequent drives to zoölogical gardens and parks, and into the country, now that every fourth city family possesses an automobile.

"Florentine babies guard carefully the wire cage that holds a chirping cricket, the little ones of Japan delight in their captive fireflies that flash their lights through boxes of plaited grass, the tiny fur-clad Esquimo rolls about on the floor of his igloo with a bear cub, the African child frolics with his parrot, the

[1] Maurice C. Hall. "The Dog as a Carrier of Parasites and Disease." U. S. Department of Agriculture, Washington, D. C. Bulletin No. 260, Nov. 23, 1915.

East Indian his mongoose, and our own little people are never so happy as with their white mice, their rabbits, doves, guinea pigs, cats, dogs, and canaries."[1]

The much-beloved dolls and the more or less unsanitary woolly lambs supply the craving of the very young child for something to love and care for, and to throw aside at will. Children of less than five are unable to give any pets complete care, but with sufficient room to raise them, they can assist in caring for pigeons or rabbits, or, in the country, chickens, pigs, colts, and calves, besides the casual interest in turtles, frogs and tadpoles, beetles, crickets, etc.

The only pets which I feel are entirely safe for city children who are excluded from many things their country cousins enjoy are those living in a water medium, *i.e.*, in an aquarium. Goldfish may be purchased and tadpoles, snails, small minnows, and water insects can be dipped up from a pond. If the aquarium is an unbalanced one, the water must be changed every two or three days, at least, and not more than two or three fish kept in one small container. Water plants can be purchased at a florist's, but when left floating they quickly deteriorate in winter in the northern states. Thus instead of providing oxygen for the fish, they prove a menace and in disintegrating kill the fish.

Fish globes generally used are rather unsatisfactory; the larger sizes shatter easily at a slight

[1] Nora A. Smith. "The Home-Made Kindergarten." Houghton Mifflin Company, Boston. (1912)

change in temperature, a draft, or a sudden jarring. The fish are constantly in the light and so ever on the move. In a jar with the lower half painted green on the outside they approach normal conditions and rest much of the time on the bottom. Plants also help to hide them. A rectangular aquarium is more expensive but also more satisfactory.[1]

If one is fortunate enough to live near the seacoast, a balanced sea garden may be arranged which requires only the renewal of water lost by evaporation. Stones and oyster shells, etc. may form the base and on it place a few small sea anemones, the little green, orange-striped *Metridium lucei* frequently found on submerged vegetation, the larger *Metridium marginatum*, small mollusks, easily picked up at low tide, with large masses of sea cabbage (*Ulva lactuca*) also found at low tide, floating at the top, which gives off oxygen to supply the animals. Chopped clam meat is a diet suitable to many forms. Numbers of aquaria with varying contents are on display upstairs at the Battery Aquarium in New York for the benefit of teachers and others who are interested.

Most of us, however, do not live near the seacoast. Fresh-water gardens are just as interesting if not as varied as sea-water aquaria. A little mud or sand should be placed at the bottom as root holdfast and

[1] Such aquaria may often be purchased in glassware departments of city stores or better ones may be ordered from supply houses such as Eimer and Amend, Kny, Scheerer Company, New York; L. E. Knott and Company, Boston; A. H. Thomas and Company, Philadelphia.

on this a layer of gravel, which prevents the finer soil from being stirred up when fresh water is added; a long glass funnel serves the same purpose. One scoop with a pail from the edge of a pond will yield many tiny creatures, but this plankton is too small for a child to see. It, however, furnishes minutæ, which in multiplying serve as food for larger things. Two or three small tadpoles are more interesting, and a water plant growing under the surface may yield a few small snails clinging to it. Both tadpoles and snails are scavengers and tend to keep the water clean. Fish other than goldfish are difficult to keep alive more than a week, and in all probability will devour most of the other small forms. The tadpoles will grow appreciably, change from gill-breathers to lung-breathers, acquire two, then four legs, lose their tails, and become minute but none the less realistic frogs. Bullfrog tadpoles do not become frogs for two years, the others the same year as hatched. A few small plants found growing in the pond may be planted in the home aquarium and the little floating duckweed (*Lemna* sp.) adds interest.

Kindergarten Apparatus

The Gifts already mentioned have by no means lost their value during the years for which they were designed. No single Gift is exhausted in less than two years' time. The same may be said of the miscellaneous blocks and, to a less extent, of the Montessori apparatus.

After Gift Four has been mastered, the child is ready for the same type of figures, *i.e.*, square and rectangle, having two dimensions rather than three. Inch-square wood or paper-board tablets were devised by Froebel, and with them are made various designs on a table marked off in inch squares.[1] Only eight square tablets should be given at first, and with them flat patterns made similar to those made with Gift Four. The child of less than five shows considerably less interest in these flat squares than in cubes, for the reason that they represent a higher degree of intellectual attainment than do the blocks, just as paper dolls interest the child much later than do dolls of three dimensions. The other tablets in Gift Seven, circles, half-circles, triangles, are designed for use after Gift Five, which includes large and small triangular-faced blocks.

It is true that some educators do not think it necessary that the Froebelian Gifts be given the child in the order designated by the master. "The Froebelian Gifts and Occupations as a coherent logical system, exemplifying the law of the connection of contrasts, or analysis and synthesis, is of no value whatever to the child. . . . The symbolic significance of the Gifts has absolutely no meaning for the little children from three to six years of age." [2] Young children have no critical judgment; they live

[1] Milton Bradley Company, Springfield, Mass.

[2] Frederick Eby. "The Reconstruction of the Kindergarten." Pedagogical Seminar, VII, pp. 229–286. (1900)

in the concrete rather than in the abstract, yet the fact that they do not understand the logical sequence is not a criterion that no logical sequence exists. Interest is the keynote upon which this sequence is based.

Gifts Five, Five B, and Six are designed for use in the kindergarten "and cannot be used with profit before the fifth year." [1] I should like to take exception to this statement and give boys and girls under five Gift Five B purely for the amusement gained therefrom. The little half-cylinders and inch-cubes with curvilinear inner surfaces are fascinating to the child of even two and one half, for no other blocks which he is likely to possess afford the opportunity of fitting curvilinear parts into parts as do these; removing from the box and replacing them alone requires some ingenuity. A whole train with wheels, on a bridge, can be made. I should like to see this set, the same enlarged, or one similar to it, in every child's block equipment. It is rather inaccessible to most parents, for it is carried only by Kindergarten supply houses, I believe.[2]

Gift Five is a continuation of the cubes of Gift Three, and Gift Six supplements Gift Four, consisting of brick-shaped blocks whole and subdivided both longitudinally and crosswise.

Stick-laying represents Froebel's Eighth Gift and is given the child of four to five years. Sticks can be

[1] W. N. Hailmann. "Kindergarten Culture in the Family and Kindergarten." Wilson, Hinkle and Company, Cincinnati. (1873)

[2] Milton Bradley Company, Springfield, Mass.

purchased in toy departments or from supply houses. The vari-hued sticks of various lengths are at the outset more interesting to the child than is Gift Seven, and their possibilities offer considerable more scope to the imagination. One set, as purchased, contains far too many sticks for an individual child's use and the great number only serves to bewilder him. A few sticks of only one color and one length should be used at first (toothpicks make good substitutes) and simple outlines made, such as those found in Wiebe's "Paradise of Childhood", Hailmann's "Kindergarten Guide", of Maria Kraus-Boelte's "The Kindergarten Guide." Later on, harmonizing colors and sticks of various lengths may be used, not only during the kindergarten years but later on in primary "busy work." A bundle of ten sticks may be used in teaching number work. Broken, they teach the rudiments of fractions.

After teaching the child to conceive of objects in two dimensions, Froebel would lead him back to the three-dimension concept by sticks held together with soaked peas. I have substituted bits of Plasticine with indifferent results, and found "Tinker Toy" an admirable improvement upon either.[1] The rods of various lengths are held by "spools" having eight perforations at the ends. A child of considerably less than three can devise simple original objects with this set, and a child of less than five can construct fairly difficult apparatus from copy.

[1] The Toy Tinkers, Evanston, Ill.

Numbers

That "the number sense is late in appearing" [1] might be read the number sense is late in reappearing. I do not see how we can help but teach numbers to the child of pre-school years in spite of the remonstrances of educators that number work should not be begun during kindergarten years. The child reaches the stage of development somewhere between two and four when numbers have for him a fascination above almost anything else and he teaches himself to count. He counts his blocks unconsciously over and over again and is constantly asking, "What comes next?" On the street he counts houses, windows, bricks, people, automobiles, and on the street car he absently counts as far as he can and then starts at the beginning again and counts by tens and by fives, if he can. There is a stage when the child seems to think chiefly in terms of numbers. They crop out while he is walking in a crowded city street, or when he is watching a bird build her nest, occupations which one might expect to be all absorbing in themselves, but which show that the child's mind is probably more wide-awake than the parent's.

One does not have to *teach* numbers to the young child; sooner or later he will seek out the knowledge for himself. "Seventy-five per cent of American children entering school can count to five." [2] Many

[1] R. R. Rusk. "Experimental Education." Longmans, Green and Company, London. (1919)

[2] *Ibid.*

children begin acquiring the number concept early in the third year and by the time they are three can count to ten, not from being taught but from asking questions. My little son at two and one half, before he could speak plainly, one day asked me, "What comes after sixty-four?" He had been hearing his older brother ask this question at some time, no doubt, and it was imitation rather than reason which prompted the question. He could then count to ten but always left out seven. Before he was three he could count to twenty, entirely by asking questions, but always some of the "teens" were misplaced or left out.

As soon as the child has learned to count, he wants to write numbers and this desire generally precedes the desire to write letters. He early learns his own house number, is able to write it, and then recognizes the numbers on other houses which are similar to those on his own. As he repeatedly passes along the street, he becomes able to read off the digits, and by the time he is four, the whole numbers, be they large or small.

Ten is perhaps the first aim, then twenty, then one hundred; higher numbers than one hundred hold a strange fascination for him and he delights in making up fanciful combinations expressing the highest number conceptions. "How far do numbers go?" "What is the last number?" are questions every live child wants answered.

"The great difficulty many children have with

number-work is not due to innate stupidity but perhaps to the fact that in early childhood they did not have nearly enough number experience. . . . Number work belongs naturally to the fourth and fifth years and possibly to the sixth but not later. It is a self-directed activity, the teacher only guides and makes brief suggestions." [1]

While this number instinct, for such it almost might be called, is strong, is the time to cultivate it gently but assiduously, for the time will in all probability come when the child will despise numbers rather than delight in them. Frequently I saved torn-off calendar sheets of good size and the four-year-old cut out the separate date squares. Then, with all the little squares mixed, the puzzle consisted in reconstructing the calendar.

Another arithmetical puzzle consists in the "Dot Puzzle" in the daily paper. From connecting up the consecutive numbers in play, the child unconsciously learns to count as far as seventy or eighty and to do it with surprising rapidity. The resulting picture is then to be colored appropriately with crayons. A variation often suggested by the child himself consists in making up the hardest dot puzzle he can for mother to trace. Dot-puzzle painting books can sometimes be found in toy departments of stores.

Sometimes when busy with paper and pencil, I gently "switch over" to both of us "thinking of the

[1] Margaret Drummond. "Five Years Old or Thereabouts." Longmans, Green and Company, London. (1920)

hardest number we can" and writing it, aiming to keep the numbers down to three figures.

Very simple addition and multiplication seem to be spontaneous in a four-year-old; it seems natural to ask "How many are two and two?" Then three and three, four and four, etc., and then two times two, etc.; subtraction and division belong to a later stage in development.

The mother must capitalize these opportunities as they arise, not necessarily devising more difficult problems but gently keeping the mind on those which he has himself conceived, as they occur, until the principles have been established, and he goes on to something else.

A little child's questions are sacred things and should never go unanswered. If one errs on the side of briefness or curtness, they may be abruptly inhibited, and if answers are too profuse, they may pass entirely above his head with practically the same result. Mrs. Hogan's son, on the other hand, didn't like stories that had to be explained. If too difficult words were encountered, he wanted to go on to something else without suffering any interruptions.[1]

Reading

A storm of protest generally arises at the suggestion of teaching reading and writing at home. "You will do more harm than good," "You make it so

[1] Louise Hogan. "A Study of a Child." Harper and Brothers, New York. (1898)

much the harder for us when your children come to school," "You are unfair to the children," "Your methods are probably antiquated," say the primary teachers. And so every mother must be her own judge whether or not she shall commence these subjects at home. But she alone knows whether or not her child is ready for them before school age arrives and she alone has the best interests of the individual child at heart.

It is very easy for a child to learn to read words without spelling them, and, once started, reading lessons grow apace. Long words are soon recognized almost as readily as short ones.

Most children learn the letters and figures before they are three, from blocks, baby plate, newspaper headlines, etc. and with little or no teaching. "How do you spell ——?" is the signal that the child is ready for more spelling. After a few weeks of casual spelling, during which a dozen three-letter words have been written on his blackboard, a few at a time, the child is ready for a primer. First Books differ widely in quality and before deciding on one, several may be compared. Bookstores which handle textbooks frequently carry several different first readers. Choose one which seems logical in its steps in development, in which the new words are stressed, and with illustrations and stories which most nearly coincide with the child's own experiences.

In order to arouse the child's interest in the new

book, it is a good plan to start with the beginning and read the book to him, pointing out the words he already knows. When the child commences to read, the reading should be steady, a little every day, and as soon as the interest wanes at each period it is time to lay the book aside until next day. With several children in the family demanding attention, the quiet concentrated attention of one is difficult to attain, but it can be done.

Since the first two years of school work are mostly taken up with learning to read, most of this time can be saved for play in the open if the mother will commence the process in the home, not aiming to produce a prodigy by any means, but capitalizing the interests as they appear.

Writing

If the child asks, "How do you make S, like this —— or like this ——?" shall you tell him, "Oh, wait until you go to school; your teacher will tell you then, don't bother me now?" If so, one inquiry is probably all he will make and the new interest will be killed almost before it is created. But if the first cautious feeling for letters is encouraged and developed as often as it reoccurs, the printing of letters will come almost without conscious effort.

It seems natural that children without training should first learn to print their letters and they gain considerable pleasure if not profit from being able to "write letters" to their relatives and friends.

"Montessori" children of three and one half are taught to write script in three months and they write fluently, with pleasure, rather than angularly and with the anguish often experienced by six-year-olds, because, as Doctor Montessori says, they are willing to trace sandpaper copies over and over again with the tips of their fingers until the muscles are trained, while a child of six will not sit quiet long enough or endure the monotony of doing the same thing long enough to acquire the same amount of training.

After the muscles have become accustomed to tracing the curves of the letters, Doctor Montessori gives the small child the geometrical insets already used in touch and sight training, and a pencil and asks him to fill in the space solidly. When he has learned to hold a pencil and to use it accurately, the space is filled in with slanting parallel lines, and then he is ready for persistent, concentrated effort in the art of learning how to write.

Most educators believe that the writing concept appears around the sixth year and Dr. Montessori, herself, now lays less stress on this early writing than formerly.

Music in the Home

That every little child loves music goes without saying; his love only needs to be gratified to indicate his appreciation of it. The younger his taste is cultivated, the more lasting it will probably be. It may be difficult, however, later in life to cultivate

a taste for the best in music if the earliest years have been fed on that which is trivial and of passing interest; it is more important that the early music be of the highest quality than that subsequent music be so. An adult who has little appreciation for the great triumvirate, Bach, Beethoven, and Brahms, may be greatly surprised that a child of less than three will select these composers by preference, when plenty of other material is at hand.

Children like program music; they like to hear horses prancing on the cobblestones, they laugh in glee when lions roar, and they feel the awe of thunderstorms; they can even find humor in stately symphonies.

It is because little folks like to perform these things for themselves and start and stop whenever the fancy takes them, that the foot-propelled player-piano is most valuable. The electric piano and the phonograph leave nothing for them to do but to sit down and listen, a most boresome occupation at best. This early appreciation of music should be of considerable assistance when music lessons commence in earnest.

Miscellaneous Occupations

Tools

But of all my treasures the last is the king,
For there's very few children possess such a thing;
And that is a chisel, both handle and blade,
Which a man who was really a carpenter made.

— R. L. Stevenson, "My Treasures."

A boy of four should be able to use a hammer almost as well as an adult and should be learning to use a saw as well. The family tool box of miscellaneous articles, nails, screws, nuts, bolts, wire, hooks, etc. is most interesting to the boy in the house. Sometimes he likes to spread the whole on the kitchen floor and arrange similar articles in little piles on the floor. One wise mother spent two hours in a hardware store hunting for nails, screws, pulleys, hinges, rings, silver wire, gimlet, etc. for a Christmas gift to her son, and his pleasure in the gift no doubt far outweighed the forty-nine cents which she expended for it.[1] Additional pleasure might be gained by allowing the boy to help select the various articles in the store.

A small wheelbarrow, spade, rake, and hoe and a small watering-can should be numbered among the tools for summertime.

Type and a Typewriter. If there is a typewriter in the house, a child of four will most certainly have become familiar with it, probably tapping the keys and hunting for the bell before he is a year old. There is little to get out of order with this machine, and I feel its early acquaintance is a link in the cultural development of every child. The ability to use a typewriter to-day is not limited to office workers; it is rather a handy tool in any one's equipment.

[1] Louise Hogan. "A Study of a Child." Harper and Brothers, New York. (1898)

A set of rubber type and an inked pad make an appropriate gift for a child of five or over, encouraging him to spell.

Playing Store may be varied, as shown in this clipping from a newspaper: "On days that my little boy ($4\frac{1}{2}$ years) is compelled to stay indoors, there is nothing appeals quite as much to him as playing store, and unless a little friend comes in, I am his customer, at the same time attending to my work, as he delivers goods to me. I keep all empty cartons for him from butter, jello, dates, etc. and he pretends they still have their contents. In playing, I tell him the price of each; what it is used for, its weight, and how it is made, or grown, to the best of my ability. . . . At the same time I try to be as polite as a customer should be. . . ."

Traffic Policeman takes the place of playing horse of days past. One boy turns upside down the kitchen stool in the center of the floor and climbs inside, sitting on the rung. The other circles about him on his tricycle, going straight ahead, turning, or stopping as the signal indicates.

Playing Train does not need to be suggested to children; it is an attribute of childhood. Two little boys make up their train as follows: Dining chairs are day coaches, two chairs front to front with a pillow on each are pullman, a chair with a dish on it containing a cracker or piece of toast constitutes the diner, and a chair placed back first is the observation car. The conductor's ticket book is a discarded

blank check book which can be punched with the needle-clipper from the phonograph, and the engineer carries a whistle in his mouth and a bell in his hand.

It is not necessary that children have *toy money* in playing store if through their imaginations small squares of paper of various sizes and with appropriate symbols will answer just as well.

Literature

The subject of children's books is one which the parents never exhaust. Every few months they should study book lists, the parent-teacher shelves in the city library, books on book lists, etc. Any and all of these are preferable to a bookstore where one may be "carried away" with the format of a book without knowing the value of its contents. It is a wise plan to invest only in well-known, standard books, which by their inherent worth have come to be known as classics rather than in newer, possibly more attractive books of untried value. Some of the latter are sure to creep into the child's library by gifts and otherwise, but should not take precedence over the acknowledged best for the particular age.

Give the child his own bookshelf, if necessary in the parental bookcases, if possible in his own room. Place it low enough to be easy of access; especially is this needful if there is a tendency to leave books alone rather than exert himself to procure them. The rather indifferent child also needs the best-

illustrated editions at first, even though they may seem to be beyond the parental purse. A little gentle prodding during the early formative years may do wonders to create a love for books.

Individual children vary so greatly that the books listed under any particular period may be adaptable to a child several years younger, particularly so if there has been a good literary foundation. Reliable graded lists are often published in the newspapers. The following is an American Library Association list of books "to form a basic collection of a child's home library."

"Nursery Rhyme" Book
"Hey Diddle Diddle Picture Book." By Randolph Caldecott
"Tale of Peter Rabbit." By Beatrix Potter
"Marigold Garden." By Kate Greenaway
"Farm Book." By E. Boyd Smith
"Golden Goose Book." By L. Leslie Brooke
"Fables" of Æsop
"Child's Garden of Verses." By R. L. Stevenson
"Dutch Twins." By Lucy Fitch Perkins
"Little Lame Prince." By Miss Mulock
"Pied Piper of Hamelin." By Robert Browning
Bible for Young People
"Pinocchio." By Carlo Lorenzini
"Wonder Book" and "Tanglewood Tales." By Nathaniel Hawthorne
"Nonsense Songs." By Edward Lear
"Just-So Stories." By Rudyard Kipling
"Heidi." By Johanna Spyri
"In the Days of Giants." By Abbie Farwell Brown

"Children's Book of Birds." By Olive Thorne Miller
"Fairy Tales." By Hans Christian Andersen
"Household Stories." By the Brothers Grimm
"Alice's Adventures in Wonderland." By Lewis Carroll
"Heroes." By Charles Kingsley
"At the Back of the North Wind." By George Macdonald
"Arabian Nights."
"Uncle Remus: His Songs and His Sayings." By Joel Chandler Harris
"Water Babies." By Charles Kingsley
"Queen's Museum." By Frank R. Stockton
"Wonderful Adventures of Nils." By Selma Lagerlöf
"Story of Dr. Doolittle." By Hugh Lofting
"What Happened to Inger Johanne." By Dikken Zwilgmeyer
"Swiss Family Robinson." By J. D. Wiss
"Peterkin Papers." By Lucretia P. Hale
"Peter Pan." By J. M. Barrie
"Home Book of Verse for Young Folks." By B. E. Stevenson
"A Little Boy Lost." By W. H. Hudson
"Jungle Book." By Rudyard Kipling
"The Boy Who Knew What the Birds Said." By Padraic Colum
"Merrylips." By Beulah M. Dix
"Wonder Book of Old Romance." By F. J. Harvey Darton

Mental Tests

There are very few mental tests which are applicable to children of under-school age because there is

little opportunity on the part of educators to standardize tests upon individual children in the home, such as done with groups in the schoolroom. In the Kuhlmann "Handbook of Mental Tests",[1] however, are given graded tests for children of from three months up. These tests are valuable to the mother in determining whether or not her child is up to the standard for his particular year. For children of from three or four on may be used such tests as "The Detroit Kindergarten Test" [2] and "The Pintner-Cunningham Mental Test for Kindergarten and First and Second Grades",[3] etc. If several of these tests are given a child of any given age, they tend to check each other and give a true ratio of his mental age and of his intelligence-quotient. A bibliography of tests in schools is published by the World Book Company (ten cents) and from it the mother who is interested may select the tests she wishes to use.

Mental tests serve chiefly as a means of determining the superior children in a group; the dullards are apparent enough. The brighter children are often allowed to skip a grade but in so doing they are placed with older children, becoming slowly if at all assimilated into the new group. Thus they become conscious of their superiority perhaps for

[1] F. Kuhlmann. "A Handbook of Mental Tests." Warwick and York, Baltimore. (1922)

[2] The World Book Company, Yonkers, N. Y. (Ten cents)

[3] Same publishers. (Twenty cents)

the first time and are recognized by their colleagues as "different." The tests are beginning to be used as a means of giving fuller courses within the same grade, perhaps within the same room.

The pre-school education should not be used to stimulate the intellect artificially and make of the young child a near-prodigy; the parent should remember that although intellectual processes may be forced, the corresponding moral growth cannot be equally accelerated.

If we have adequately cared for the child's physical and moral development and have, as well, sharpened the powers of observation, created an interest in nature, presented good literature, music, and art, and taught self-reliance and mental concentration, then the pre-school age can no longer be called the "neglected age", and the basis will have been established, in so far as environmentally possible, for an efficient life.

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